Socio-cultural perceptions and practices of dietary choices with focus on fat intake in middle aged Pakistani women in Oslo - a qualitative study

Twinkle Dawes

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Supervisor: Anne-Lise Middelthon University of Oslo

Co-supervisor: Gerd Holmboe-Ottesen University of Oslo

Co-supervisor: Bernadette Kumar University of Oslo

Department of General Practice and Community Medicine

Faculty of medicine

University of Oslo

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CONTENTS

ABSTRACT

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Introduction: The nutritional transition has resulted globally in dietary changes, of which high intake of fats, sugar and refined carbohydrates are some of the main characteristics. This has resulted in increase in lifestyle diseases like type 2 Diabetes and Coronary Heart Disease. In Norway, a dramatic increase of type 2 Diabetes has been observed in migrant populations especially from the Indian subcontinent. Amongst these groups, prevention has resulted to some extent in increasing knowledge about the adversary effects of sugar and reduced intake of visible sugar. However this does not seem to be the case with fats leaving the issue of fats unattended. I wished therefore to explore perceptions and practices related to dietary fat intake in middle aged Pakistani women in Oslo. In particular, the intake of *ghee*(clarified butter) was interesting to explore, as *ghee* is a highly saturated fat and is an important component of the Asian dietary tradition. My objectives were therefore the following:

- *To study socio-cultural perceptions and practice of dietary choices with focus on fat intake in middle aged Pakistani women in Oslo*
- *To identify possible barriers to changes in healthy choices of dietary fat intake*
- *To discuss its implications in preventive health care.*

Methodology: A qualitative method was chosen using in-depth interviews conducted with the help of an interview guide. This was supplemented by a structured questionnaire. Interviews were conducted on 12 Pakistani women in the age group 42-70 years in the period October-December 2002. The women were recruited at a centre for the elderly called Grûnerløkka Eldresenter and their informed written consent obtained. Interviews were conducted in Hindi/Urdu at the women's convenience either in their homes or at the centre. Tape recordings were later transcribed and analysed by the principal investigator.

Results and discussion: The study explored post migratory cooking methods, cooking medium and food selection. In the case of cooking methods, foods were mostly prepared as traditional curries or fried. This was done to provide"digestibility"and was similar to methods used before migration. Roasting, grilling and baking were also employed to some extent. Plain, boiled food was seldom eaten being reserved for people with "weak digestion" like babies, sick and old people. Concerning cooking medium, especially after family reunion, the womens main cooking medium was home made *ghee* symbolising "nourishment" and providing "correct taste". In addition to *ghee*, low cost, refined plant oils like sunflower, corn oil were used for deep frying of ethnic snacks. Later, due to failing health and dietary

recommendations, plant oils became the main cooking medium. *Ghee* was now reserved for providing nourishment of children's foods and for taste in traditional festive foods. Plant oils were bought in large quantities and used generously with no attention paid to nutritional content, dates or quantity. Plant oils that were used for deep frying were reused several times over a period of several weeks. Some had tried olive oil but discontinued its usage due to unfamiliar taste and unsuitability and high price. In general, plant oils did not have the same status as *ghee* providing less nourishment in the women's thinking. Concerning food selection, an increased intake of foods of animal origin was reported which was perceived as nourishing. Intake of red meats was high, as it was eaten daily in most households. All meat was ritually slaughtered classified as *halal*. Intake of vegetable and lentils remained negligible. Later due to failing health, and dietary recommendations, intake of white meats(chicken/fish)were added to red meat intake. This also matched adult childrens perceptions of healthy foods which they had integrated from the host population. However, cooking methods remained unaltered and risky as unskinned chicken and fish were made primarily as curries. When roasted or grilled, chicken was eaten as a side dish to a red meat curry. The same applied to baked fish. The most common fish intake remained fried fish fingers or fish burgers. The intake of vegetables and lentils was negligible. The few times vegetables and lentils were included, they were added to a meat curry, or made as a pure vegetable or pure lentil curry often with a meat curry in addition. Vegetables were also popularly fried. In the public sphere, foods served to guests were lavish, energy dense festive foods, primarily of animal origin, along with deep fried festive snacks and sweet desserts. As a guest one expected to be served such foods.

Conclusion with implications for public health: The study shows that after migrating, despite following dietary recommendations of reducing sugar, *ghee*, switching to plant oils, and consuming more white meats and foods of vegetable origin, the impression was that total fat intake remained high due to cooking methods, choice of cooking medium and selection of foods as reported by the women.This was a general impression as no data on measuring of fat intake was done. Concerning fats, the study shows that the message "fat is harmful" as conveyed by the health professional is insufficient without the understanding of the role of such foods in the lives of these particular women. Future dietary messages must take cultural and ethnic differences into consideration and be tailored for each specific ethnic group. In addition, women's health must be given importance, empowering them to make good decisions concerning their health. This will remain a public health challenge.

DEDICATION

To my husband Harald and my children Robin, Ruby and Nina for their patience and understanding during this period.

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1. GENERAL INTRODUCTION

The composition of the Norwegian population has changed in recent decades with national statistics showing an increase of immigrants born in a foreign country (first generation immigrants) from 1.5 % in 1970 to 7.6 % in 2004. An immigrant being defined as a person born of two foreign born parents. Immigrants from the developing world represent almost 51% of this population, of which the Pakistanis comprise almost 25% (1).The Pakistanis represent an ethnic minority, being socially and culturally different from the ethnic Norwegian host population. In general the term ethnic is often used when referring to the "otherness" of people. A common view of it embraces skin colour, language, culture, religion, food, beliefs, and behaviour(2). Another term used for this group of Pakistanis is "South Asian" which is a generic term that includes people from the sub-continent of India, Pakistan, Sri-Lanka, Bangladesh(3).

Migration to Norway from Pakistan started in the early 1970`s mainly from a rural area with a selection of young, healthy male migrants seeking labour ("healthy migrant effect"). The next decades resulted in family reunion replacing single male units with family units. Such migrants have faced major lifestyle changes after migrating (4).A report on the health of disadvantaged groups in Norway shows that the health of migrants has been adversely affected due to risk exposures in the host country. Examples of such risk exposures have been low socio-economic status, low education, high unemployment, along with marginalisation, and stress. This has been seen in the form of less favourable jobs, with less disposable income, cheaper and overcrowded housing, compared to ethnic whites (4). In addition to such risk factors, these migrants are now slowly being exposed to ageing away from home bringing with it new challenges. Global figures show that life expectancy at birth has risen to 65 years in 1996, reaching 380 million, reflecting a 14 % increase between1990-1995. Between 1996-2020 it is projected to rise by 82 %, many of which will be in the least developed and developing countries, as well as in the developed countries (5). The likelihood of such socio-demographic changes will also be seen in Norway where the numbers of migrants that came in the late 1960`s and early 1970`s and were then in their twenties and thirties, are now ageing as well (4). Old age will be an additional problem in addition to problems related to marginalisation, weakening of the traditional extended family, erosion of social values, loneliness, immobility, weakening of their role as head of family, making them socially and

emotionally more dependent on others (6, 2). Many migrants still perceive their stay as "temporary", planning and wishing to return home once the next generation is settled (2).

As this study is about diet, a brief description of general food traditions from the Indian subcontinent is necessary to provide a background to the study. According to Chappiti, food traditions from this region are based on the socio-cultural context that has evolved from its 5000 year old history with roots in Ayurveda (3). Over the course of history, differences in the context of food traditions between Hindu/Muslim traditions have occurred adhering to principles of dietary restrictions pertaining to foods of vegetable origin and animal origin resulting in a vegetarian/non-vegetarian diet respectively. In addition, for Muslims the principles of *halal*/*haram* or allowed/forbidden foods are important as only meat that is ritually slaughtered or *halal* meat is acceptable to eat. Pork meat is especially *haram* and forbidden to eat for Muslims (3).Apart from this major distinction, food traditions are largely the same for Pakistan and North India, despite the recent political partition of the subcontinent approximately 50 years ago into India, and Pakistan, and later Bangladesh. A common denominator to the above diet which is largely composed of vegetables and lentils from this region, is the use of spices and seasonings like *cumin*, coriander, pepper, tumeric, mustard seeds, fennel seeds cinnamon, cardamom, and cloves. Such spices are either used whole, fried roasted or ground and each technique draws out a different flavour from the same spice. In addition the use of *ghee* and plant oils are common. Plant oils in particular are used both for cooking and medicinal purposes (3). Further, Chappiti has suggested that the traditional diet from this region is a healthy diet being high in complex carbohydrates and fibre, and low in fat and sugars (3).

Concerning the women in this study, the above descriptions and distinctions to a large extent applied to their pre migratory diet in general. Such a diet was often accompanied with a more physically active lifestyle which was health promoting. However, after migrating dietary changes have occurred that may not have been conducive to health. Adel has reflected upon the impact of migration on food and nutrition as a two fold phenomena, as migrants adapt to new food patterns, and likewise spread ethnic foods amongst the host population. This depends on the degree of necessity to adapt to local foods, and the influence of ethnicity (7).

2. LITERATURE REVIEW

In a review of the literature Popkin shows that levels of physical activity, obesity and dietary patterns are rapidly changing in the developing world accompanied by a shift in the burden of diseases from dietary deficit to dietary excess. Under-nutrition is being replaced by over-nutrition caused by a shift towards an intake of more fat and less complex carbohydrate, implying a high intake of dairy products and sugar leading to obesity amongst urban, and high income rural residents (8). In the developed world, this problem is emerging amongst minorities and marginalised groups and is closely linked to environmental factors like lifestyle and socio-economic changes (9). In addition to environmental factors, a high prevalence of obesity in migrant Asians in the developed world may have a genetic component as well (10). A further review of literature reveals several epidemiological studies showing the high prevalence of type 2 Diabetes (which I will refer to as Diabetes for the rest of this study) and Coronary Heart Disease (CHD) amongst migrants. A study from Britain shows that migrants from South Asia develop high rates of Diabetes and CHD in association to central obesity. The mortality rates among the migrants were 50 % higher than the national average (11).The South Hall Diabetes survey showed four times higher prevalence of Diabetes in South Asians than in the indigenous population (12). A similar finding from the Coventry survey confirmed the above for men, but for Asian women the prevalence was found to be twice as high compared to white women. In addition to high prevalence, in Asians the age at presentation is also significantly earlier, and the condition may go undiagnosed in 40 % of the Diabetics (13). In the case of Diabetes in particular, World Health Organisation (WHO) statistics report that the number of Diabetics globally is estimated to be about 135 million, and will rise to 300 million by 2025, the main reasons being population ageing, unhealthy diets, obesity, and sedentary lifestyle (5).This pattern is emerging in Norway as well amongst ethnic minorities showing a very high prevalence of Diabetes and CHD, obesity, hypertension, and high cholesterol (4).

Studies from developing countries show how urbanisation, the changing role of women, adversely affect dietary and physical activity patterns (8).Lack of education is another associated risk factor. In the developed world, education seems to be inversely related to body weight. A study from Britain, USA and France showed more obesity amongst both sexes from lower educational levels (14). In a migrant study of middle-aged and elderly men and women in Jerusalem, the prevalence of obesity was lowest in the more educated and in women born

in Europe and America. In addition, more self reported ill-health was found amongst obese people (15). Such patterns could be linked to education as it has been suggested that people with high education tend to follow dietary recommendations and adopt risk avoidance behaviour, compared to people with low education. This may be due to the fact that people with high education also tend to have high socio-economic status as wel l(16). This however does not necessarily apply to all populations, especially not in the developing world. In a study of Saudi Arabian women, overweight and obesity were more prevalent among high-income, urban residents. In addition, being overweight increased with age as well reaching a maximum at the sixth decade (17).

In general, it is suggested that a healthy balanced diet involves frequent intake of vegetables, fruits, fish, pasta or rice, and low intake of fried foods, fried fish, and potatoes. Such a diet is negatively correlated with obesity and positively correlated with the "good" or HDL cholesterol (19).This makes type and quantity of fat important. A study from Poland revealed that mortality from CHD fell by one third among polish men and women from 1991 to 1993 largely because of decline in intake of saturated fat from meat, dairy products, and butter (19). In the case of the Asian diet, one UK study comparing different migrant groups showed that South Asian Muslims ate less lentils and vegetables compared to others South Asians. In addition, they had a high consumption of sweets with high content of sugar and *ghee*(clarified butter), and less wholemeal bread, less artificial sweeteners, and no brown rice resulting in high fat and low fibre diet. Such a diet could lead to obesity. The study also showed that home made *ghee* was slowly being replaced by commercially sold *ghee* as it was more easily accessible (20). Yet another cross sectional survey in the U.K showed high risk factors for Diabetes and CHD in Pakistani, Indian, and Bangladeshis. The study suggested that this was linked to the fact that that South Asians have a high intake of *ghee* and other cooking oils and meat foods in general. Stress poverty, insulin resistance were added factors (21). This particular study also compared heterogeneity between the groups, showing that a higher proportion of Pakistani and Bangladeshi males had Diabetes (22.4% and 26.6% respectively) compared to Indians (15.2%). Similar findings were seen in women.

Returning to the context in Norway, a dietary study from 1992 viewed food choices and perceptions of healthy/unhealthy foods in the general Pakistani migrant population, showing that dietary fat from dairy products like meat, chicken, butter, margarine had increased after migration due to improved accessibility. Such foods were earlier looked upon as complementary or additional food items and had changed more than the basic food items,

being associated with high status in the country of origin. Vegetable consumption tended to remain the same (22). Another later study showed that dietary changes similar to the study above had occurred after migration but there was lack of knowledge about why these changes had occurred as they perceived their food to be the same as before migrating (23). The consequences of such dietary intake may have resulted in the high prevalence of lifestyle or non-communicable diseases. In the case of Diabetes, the Romsås study in Oslo revealed a prevalence of 37 % in female migrants between 40-60 years from the Indian subcontinent. This study also showed that a large percentage of these women were overweight, and amongst the Diabetics, 82.4 % were overweight (24). The study focused on reducing obesity by emphasising a reduction in fat and sugar intake and increased physical activity in migrant groups. In addition, The National Health Screening Service, Oslo Municipality and University of Oslo (Institute of General practise and Community Medicine) jointly launched the first ever Oslo Health Study (HUBRO), a demographic health survey in the year 2000. This study focused on migrant health in general, in order to generate health data of Oslo residents as such data has largely been lacking previously (25,1).Such data also included lifestyle as well as risk factors.

Apart from the prevalence and dietary studies mentioned above, there have been limited studies on socio-cultural factors influencing dietary customs of South Asians migrants. This also includes lifestyle or living arrangements as well which in turn may influence food intake. However a few studies have been done which included elderly Asians. These were mostly of a quantitative nature. An example of one such study was an investigation of Asians in Britain (over 65 years) which showed that in South Asian households 1 in every 4 homes is multi-generational (26). This implies that many ethnic elders tend to live with joint families with common kitchens. However this does not imply that the same type of food is eaten by all family members. In addition to changing diet, lifestyle patterns, living arrangements, the burden of ageing will be an influencing factor as well. The WHO Ageing and Health Program shows that in the future, numbers of elders will rise, with elderly women outnumbering elderly males due to longer life expectancy feminising the ageing problem (27). This will in particular affect elderly women as the above mentioned WHO program recognises that gender is one of the major determinants of health (27). The program suggests that living longer is not necessarily living healthier, as the likelihood of disability increases with age, and several national surveys show increasing numbers of disabled women among the aged. Heart disease and stroke account for 60% of all female adult deaths. Women will

remain a risk group. There is all reason to believe that this phenomena will also occur in Norway, within the ethnic minority population as well.

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3. FOCUS OF STUDY

Migration can lead to several aspects of changes in lifestyle, including changes in diet and physical activity. It is beyond the scope of this study to cover both these aspects. Concerning dietary changes, the most interesting and evident change however is the westernization of the diet, which is generally richer in fats and refined carbohydrates resulting in lifestyle diseases like Diabetes and CHD seen in studies mentioned in the literature review. In Norway, this has been observed in migrant groups as well, especially in the South Asian community as the Romsås study mentioned above in the literature review reveals (24).As Diabetes has traditionally been associated with high sugar intake, the general message to reduce white sugar intake has been registered in the community, but the general role of fats as a contributory factor to obesity which in turn is a risk factor for Diabetes remains unclear in this migrant community. This has been my general impression after having worked as a health professional with middle aged Pakistani women in Oslo. The importance of eating less fatty food was slowly emerging in their agenda but dietary knowledge about how to convert this knowledge to practice remained unclear. As both fats and refined carbohydrates are risky for obesity and Diabetes, CHD and some attention has already been paid to sugar intake, I choose to focus on fats in this study, as it was the least explored so far in this particular migrant community.

3.1 RATIONALE FOR FOCUS ON FATS

In biomedicine, fat is considered the most concentrated form of energy and can be found in concentrated forms in margarine/butter, and oils, and otherwise in foods like meat and dairy products (28). Fat can be of two types being either saturated fat or unsaturated fat. Saturated fat is hard fat found in butter, margarine, meat and dairy products and is considered harmful for health. Unsaturated fat in contrast, is found in oils, nuts, soft margarine, fish, chicken and is considered less harmful for health (29). Excessive fat intake can however regardless of type

lead to obesity (28). Obesity is basically an accumulation of excess energy in adipose tissue leading to increase in body weight (28). Studies which I have referred to earlier show that a diet with high fat and refined carbohydrate content, combined with sedentary lifestyle can lead to obesity which is harmful for Diabetes (9). In other words, in the case of Diabetes, obesity can be an important risk factor of disease, with lack of exercise, hypertension, smoking and alcohol being associated lifestyle risk factors (30). By adopting a healthier lifestyle and by controlling or preventing obesity most Diabetes is preventable (31).

In the Norwegian public health debate over the past decades, there has been a focus on reducing fats in general, and many ethnic Norwegians have started using less fatty products of late. However, the problem remains with high sugar intake amongst the ethnic Norwegians. In contrast, in the Asian migrant community, this message of reducing total fats has bypassed the first generation that migrated in the 1970`s to a large extent, and only limited attention is being paid to the reduction of visible sugar. Henriksen`s study from 1992 from Norway, revealed that dietary fat had increased after migration (22). A finding by Dhirad almost a decade later showed there was less awareness about why such changes had occurred (23).My impression was that even though there has been a general change from saturated to unsaturated fats due to failing health and dietary recommendations from the health professional, the issue of fats remained problematic. I wished therefore to explore perceptions and practices regarding fat intake in a Pakistani dietary context. This implied exploring dietary choices with focus on fat intake through the preparation of foods, choice of cooking medium and selection of foods. In particular the intake of *ghee* (clarified butter)was interesting to explore, as *ghee* is a saturated fat which most people from this region are familiar with and have used earlier or still presently use, but which most non-Asians are unfamiliar with including the health professional with an ethnic Norwegian background.

The objectives of my study therefore were:

- *To study socio-cultural perceptions and practices of dietary choices with focus on fat intake in middle aged Pakistani women in Oslo.*
- *To identify possible barriers to changes in healthy choices of dietary fat intake in their diet.*
- *To discuss its implications for preventive health care.*

4. METHODOLOGY

4.1 STUDY DESIGN

The objectives of my study were best answered by using a qualitative method. Two methods were used for data collection, the main method being qualitative in-depth interviews. The other method was answering a structured questionnaire pertaining to socio-demographic data about socio-economic status, age, education, language skills, employment, vocation, household size and structure, and length of stay in Norway. It also included data about history of Diabetes and CHD if any, for the respondent herself or her husband. This was done to provide background information about the respondents. This was completed prior to the start of the in-depth interview during the same setting. In order to protect the anonymity of the respondents, the names associated with the citations presented in the study are fictional. A total number of thirteen interviews were booked in the period between October -December 2002, which resulted in twelve completed interviews and one missing interview

4.2 STUDY SITE

The fieldwork was carried out in Oslo the capital city of Norway in the period October-December 2002. The respondents were recruited from Grünerløkka Eldresenter, a centre for the elderly which included both minority ethnic elders as well as elderly ethnic Norwegians. The inclusion of ethnic elders to this centre started as a project by an NGO called Norwegian People`s Aid (Norsk Folkehjelp) with the aim to create a meeting place for ethnic elders especially women. This was done to combat isolation and to integrate ethnic elders into the existing care facilities for the elderly. I was employed as project manager for this particular project at the time of this study. The implications of having both roles as project manger and researcher I have dealt with in more detail under the chapter on position of researcher.

Amongst the ethnic elders, the majority were Asian women, mostly from Pakistan and some from Afghanistan, India, and Irak. Later other groups were started as well, like a group for Pakistani males and a trans-national or mixed group where Norwegian was spoken, as opposite to the other two groups where Urdu/ Punjabi tended to dominate, making a problem for the users who lacked language skills in Urdu/Punjabi. The women in the Urdu/Punjabi

group gathered at weekly meetings on specific days that were different than the other two groups who had their own specific meeting days. The women's participation at this centre was motivated by their need to meet other Pakistani women of their own age group. Several of them brought children, grandchildren, visiting relatives, daughters, daughters-in-law to the centre, especially when there were some special occasions like excursions, lectures and festive celebrations. This was in contrast to the ethnic Norwegian users who tended to come alone. All the Asian women who visited the centre were mobile and came without help or transport facilities to this centre.

This centre is situated in the administrative district of Grûnerløkka in the central and east part of the city of Oslo, for the local residents of this district. This inner city area has traditionally been an area with a high concentration of immigrants from the developing world that settled here in the early 1970`s. Another typical feature is the large elderly ethnic Norwegian population with a working class background with relatively low socio-economic status. This has changed in recent years, as some migrants have moved to more suburban areas, while many have chosen to remain in this area, in spite of young urban ethnic whites with high socio-economic status that have moved in.

4.3 THE RECRUITMENT PROCESS

The inclusion criterion was women from the Indian subcontinent mainly from Pakistan, who were over 50 years of age and residing in Oslo, and having a lay or a non professional knowledge of Diabetes/CHD. The number of respondents was limited to10-15 due to the qualitative nature of this study. It was important to remember at the onset of the study that the number of respondents would depend on the amount of new knowledge generated. Not having a diagnosis of Diabetes or CHD was not an exclusion criterion, as I also wanted to include as many as possible of those who had close family members like a husband with the diagnosis.My reason for this was that such diseases are caused by lifestyle choices, like diet and physical exercise, and husband´s diet is mostly managed by these women. These diseases can be prevented and reversed, depending on the knowledge and perceptions of these women both for themselves and as motivators of change in their households and network.

The sample for the study was recruited from the centres as already stated. I gave a brief presentation of the study at two of the weekly meetings at the centre saying I wished to contact some of the women to recruit them for the interviews. The potential respondents were then selected and approached by me personally and invited to participate. This was done after their weekly meetings were concluded in the period end of August and September 2002. I approached each one separately. Some gave a fixed date and time right away, while others asked me to telephone them later at home to fix the interview. I presumed this was to have more time to think, as they might have been uncertain, and would like to check first with their husbands. This may be due to accordance with traditional Asian female roles of subordination to males especially outside the private sphere. As I was unable to recruit sufficient women, I had to select some names from the membership list and approach them by telephone. This resulted in a total number of thirteen interviews which were booked during the period October -December 2002.

There was in general some reluctance with their agreeing to participate, something that I anticipated as a problem, as they were frequently asked to be interviewed by the media and by Norwegian researchers, and perhaps were fed up of being "guinea pigs". They seldom declined however to such invitations to participate, as they felt their reluctance or refusal to participate might be perceived by Norwegians as being impolite and un-cooperative. Perhaps they felt by participating they could rectify prejudices by ethnic Norwegians of Pakistani women as lacking a voice of their own. There was greater inclination to refuse to participate if photo taking was involved. This was observed by me when working at the centre. In the case of my study, some commented that they agreed to participate due to general politeness and not wanting to cause offence as they were familiar with me. Others mentioned that by agreeing to participate it would be of help to the rest of the community, while most did not comment the issue at all.

There were altogether 13 interviews booked for in-depth interviewing. Suitable dates were chosen for the interviews at their homes during the daytime, apart from two interviews of two working women which was agreed upon for the evening time. Of these two, one of them expressed some reluctance in participating but agreed in the end. Limited time and other priorities like cooking and housework, were reasons given by her for her reluctance in participation. The rest of the women in the sample were non-working outside the home. None of the others stated any problems in participation like lack of time as the interviews were done in the morning hours after their household chores were over.

There was one missing interview (tenth interview) which was booked for the evening after the potential respondents working hours, and upon arrival at her home her son informed me she was not at home. There was no follow up from either side. In my case this was due to lack of time and my need to start data processing of the already collected nine interviews, and to complete the remainder three booked interviews. I was also uncertain at that point of time of how much I needed this missed interview, and decided to come back to it at a later stage if necessary, or find another respondent who was non-working as it seemed easier to recruit nonworking women.

The recruitment process as discussed above, resulted in thirteen booked interviews. The initial inclusion criterion of minimum age was 50 years, being an acceptable cut off age for being labelled as an ethnic elder in other European countries like in the UK. But once in the field I found that it was more important to recruit respondents who could verbally share their thinking easily, than have 50 years as the lower limit. I decided therefore to lower the age limit to below fifty years as there were several women in the 40-50 age group which was both observed by me and could be checked from the membership register.

To recruit strictly on the basis of precise age would have been problematic in this group judging by my earlier experience. This knowledge I had acquired from my working experience earlier with the women as many functioned with incorrect chronological ages. Such information is not registered in rural Pakistan in the same manner as city registers. In addition, several of them had been born at home and not in hospitals, a common practice in rural areas. Many of the women said their correct age was different than what was on the passport, and some gave an approximate age, not being able to remember correctly. This was mostly experienced in the oldest respondents and ones from rural areas. When asking for husbands' age, it was the same problem. It was obvious that the precise chronological age was of less importance to them.

4.4 THE SAMPLE

As the tenth interview was a missing interview the total number of completed interviews ended at twelve. I decided after completing nine interviews that twelve would be sufficient to fulfill the objectives of the study. I had already booked the last three interviews when making

this decision. The respondents were all first generation women with migrant background primarily from the Indian subcontinent. Most of them joined their husband in the mid and late 1970`s, excepting one woman who lived with the couples children in Pakistan, while the husband lived in Oslo, during parts of the childrens primary schooling years. Six of the women were under fifty years, the remainder over .There was however one woman who was 42 years of age in contrast to the oldest who was 70 years. Despite her young age, I decided to include her in my sample as her age matched the general onset age of Type 2 diabetes which is also labelled old age Diabetes. Further she had a husband with Diabetes and CHD.

Eleven of the respondents were from Pakistan, while one respondent was from Afghanistan. Even though Afghanistan is traditionally not included when referring to the Indian subcontinent, I decided to include her in the study as she had close social links to the other women and fulfilled the remaining criteria of age, residence and attendance at the centre. In addition she was also Muslim, and spoke Urdu being able to communicate easily with the other women. Lastly her background from Afghanistan with close geographic proximity to Pakistan and similar dietary traditions made bonding easier between her and the other women.

All the women were registered as residents in Oslo, and had been living in Oslo over a period stretching from 9 years to 30 years. Six of the women lived in the district where the centre was located, while two of the women had been living in this district earlier and now moved out. The remainder were presently living in south and east suburban Oslo, having links to this district through attendance at the day centre. Although the centre was meant for residents of this particular local district, the addresses of the Asian elderly users were not precise as several tended to move around in different parts of the city, living with different children at different times of the year. In general, there is more mobility in this group as some travel back home in the winter months for long periods, without notifying authorities as the official limit is six months in which a person can live outside the country.

Apart from one woman who was working full time in a manual job, none of the women were in active working life at the time of the data collection for this study. One had experience working in a kinder-garden from before. Others had working experience helping in family shops, cleaning jobs, and one had experience with child care being a private nanny. One was retired with old age pension, while three were on disability pension. The remainder were housewives and non-working. Their education stretched from zero years to class eleven with most having class five or class eight schooling, a common cut off point for primary or

secondary education in those days. One woman had a university degree from Pakistan and had a vocational background earlier. Language skills in Norwegian were limited to some speaking, and limited reading. This varied in the sample from those who could make themselves understood in Norwegian, to those who needed interpreters. They all spoke Urdu their national language. In addition they spoke Punjabi and two could also speak Pashtu, a language spoken in the North West Frontier Province of Pakistan and in Afghanistan. All were married. Presently, one was a widow, one was divorced officially, and three were single living alone with children, but not officially divorced while the remainder were living with husbands. The ages of the children ranged from 10-32 yrs, and several had grandchildren. None were residing alone, living either in two or three generational households. Eight of the twelve women reported themselves of having Diabetes. Of the remainder, three said they had CHD, and of these three, two had both CHD and Diabetes. Of these two, one had angina and the other had heart attack earlier. The one woman who did not have either Diabetes or CHD had a husband with both Diabetes and CHD. She was also the youngest being 42 years and her age can explain her not having the disease so far. Amongst the husbands, three had both Diabetes and CHD, four had only Diabetes and four had only CHD. One woman was a widow, so her husband's diagnosis was irrelevant. Further, amongst the husbands three had earlier had heart attacks, and one had a bypass and pacemaker (*see table 1 in appendices*).This finding of such a high number with symptoms being part of the metabolic syndrome I was unaware of while recruiting respondents, even though I was aware of the general high prevalence of Diabetes/CHD as it was often talked about in the group. Some of the women had been attending patient groups at Aker Hospital (Lærings og mestrings senter) and Lovisenberg Hospital (Lovisenberg Diakonale Sykehus) as they had such diagnosis. Several mentioned they had relatives back home in Pakistan and acquaintances in their community in Norway with similar diagnosis.

By choosing women from a non health institution, I felt it would help to reduce bias in responses arising from a health institutional environment. However, I was also aware that this might have an opposite side as well. By selecting respondents from the centre, I was aware I might get women that were motivated to change, more outgoing, and had been exposed to some health information through the project. To conclude, the planned sample size was changed once the field work started and now comprised eleven women from Pakistan, and one from Afghanistan making a total of twelve altogether. They were having the knowledge that I was seeking for in my study, and were willing to share it. Their ages stretched between

42 to 70 years, and all of them were residents of Oslo with their length of stay ranging from 9 to 30 years.

4.5 DATA COLLECTION

4.5.1 QUALITATIVE IN-DEPTH INTERVIEWING

As mentioned earlier a qualitative method was used for the purpose of this study, with in-depth interviews, supplemented by a questionnaire. This approach was most suitable for the objectives of my study. An understanding of this method was essential from the start. According to Gubrium and Sankar, such a methodology is quite different compared to a quantitative methodology having its own distinct orientation with own traditions and methods and is not a just a reduction or precursor to quantification (32). According to Kvale, it is used to study culture, and to study the process of change, or how an attribute or status comes into being not just the outcome (33). Further, it is based on empirical data from everyday life, with focus on the respondents' experience, as it can be used to detect and represent meaning in a context from the actor's viewpoint. Kvale has further suggested that such methodology is based on the subjectivity of the respondent, and what the respondent wishes to disclose.

Gubrium and Sankar have suggested that in general in-depth, open ended interviews can help explore phenomena or perceptions in greater depth. This is made possible through discussions that are left open to the respondents, like in open conversations, keeping in mind that the respondents own experience is the basis for the use of this method which can be followed up by asking for clarifications or elaborations. In the case of my study, this method would help to explore different attitudes, perceptions and processes concerning lifestyle changes after migration with a focus on dietary fat intake. The aim was to focus on associations that might be unclear or unconscious to the respondent, resulting in a defined or set pattern of behaviour concerning dietary fat intake.

When exploring this method further Kvale has suggested that no standard techniques or rules exist for an interview investigation in the case of qualitative interviews (33). This gave both me as the researcher and the women as respondents flexibility in probing and answering through open conversations. However it was important for me as the researcher, to steer the

general theme of the discussion systematically making sure all themes were included during the course of the interview. This was done by using an interview guide which was an important tool as it provided support for this function. I have described this more in detail under the interview itself.

Gubrium and Sankar have also focused on the weaknesses using such a method. Problems related to accuracy, understanding the context as an outsider, having contrasting perspectives, interpretation, and terminology could be problematic. This I have dealt with under the discussion on the position of the researcher. Another dilemma could be if a life story is extraordinary or atypical. The problem that would arise then would be to identify how typical or atypical the story was. Yet another problem that could arise is how much to disclose to the researcher, in spite of ensuring confidentiality to the respondent. This latter problem I experienced in the field. Some affirmed in the field that it was best to be cautious of gossip, while others said "it does not matter to me". Another weakness as described by the authors, could be that the researcher may be confronted with the dilemma to act as the respondent's advocate or intervene when presented with information that requires intervention. Such weakness could be of a general nature, but are more pronounced when dealing with vulnerable populations like ethnic minorities, elderly, women, or disabled (32). I did not experience any such specific problems.

When discussing this method, it is important to mention the issue of validity. It has been implied that qualitative research is well developed in terms of validity, and underdeveloped for reliability (34).In other words, in qualitative research the emphasis has been more on validity rather than reliability, while in quantitative research it is the opposite. Validity checks whether one is measuring what is intended to measure or calling what is measured by the right name. It involves assuring the accuracy of findings, and testing their truthfulness. When doing in-depth interviews it is important having a cultural reference and framework when probing and elaborating, in order to maintain this approach, and to ensure validity as Gubrium and Sankar have implied (32).

Even though the issue of validity was not such a pressing issue, it could not be ignored entirely. To ensure validity, all data was transcribed by me with as much accuracy as possible as this was transcribed from spoken Urdu/Hindi to written English from the tapes. I tried to do the transcribing as early as possible after the taped interviews, in case of problems of unintelligible recording. In addition I took hand written notes alongside the tape-recording, so

I could refer to the notes in case of discrepancies. I have described the whole process of taping, translation, transcribing in the chapter in which I am describing the interview itself. It was also important to be aware that when writing the recorded answers some data could be lost. As there was no pilot study, and since I was doing all the interviewing myself, it was essential that the factors above were taken into consideration. Lastly, this is also the most common technique used by others doing similar research with Asian ethnic minorities in U.K making it a valid method.

The issue of representability which is an important feature in quantitative research was also an issue I had to deal with to some extent. The reason being that I was faced with the question of whether I would be able to generalise the findings to all elderly Pakistani women in this age group in Oslo. This was difficult in my study as the study sample included women who were registered users of the centre living in varying districts. Being users these women were probably generally more motivated to change, more outgoing and had been exposed to more health information through the centre. So it would be difficult to generalise the findings to the rest of the population with similar background. My study could only show findings in this particular sample, and show the variation in the sample itself. However since so many of the sample including their close network had Diabetes and CHD, the findings may be applicable to a wider population.

4.5.2 THE INTERVIEW ITSELF

All interviews were booked, undertaken, taped and transcribed by me alone. The interviews were conducted just once using a single interview approach. The reason was limited time for the data collection and the level of this study. There were no planned follow-ups or repetition. In addition, I used a structured interview guide written in English, a language I was comfortable with, from which I picked my themes for probing. The interview guide helped to lead me through the main themes, and to cross check myself to ensure that all themes were included during the interview. This interview guide proved to be a valuable tool to use when probing for more information, or where it was difficult to obtain answers from the women. Due to the single interview approach I had to cover all the themes in my guide in that one interview.

The interviewing was done in the fall of 2002. All the interviews were done in their private homes as planned, apart from one woman who felt she would be disturbed by grandchildren and other family members, and preferred meeting in a neutral place. The choice being the centre. All the others were interviewed during the late morning hours, after finishing their household work. This enabled them to talk freely and relaxed as they had time available. One interview was in the late afternoon, and got rushed at the end as husband and children had started returning from work/studies, and she had to serve them lunch. The husband was a taxi driver and had irregular working hours. The one interview booked in the evening was rather short lasting about over one hour, as it was timed for the evening after her returning from work, and she was tired and also had to start cooking. Due to her resistance in using too much time to answer, and my not wanting to press or pursue more as it would be unethical, some of the questions ceased to be open ended.

Each interview lasted up to approximately 2 hours, with the first 20 minutes or so used in general polite and casual talk. This was done to introduce the topic, exchange "polite talk" a necessary element in most cultures, but more pronounced in Asian cultures. This took place while some tea and traditional snacks were served by the women first. I do not think such initial necessary formalities at the start influenced their answers as my questions were related to neutral issues like food selection, cooking methods, and health in general. Maybe it helped in a favourable way by building rapport. This introductory phase can also be attributed to general politeness and my visiting them in their homes for the first time even thought we had been meeting at the centre earlier on. It can also imply equality and to impose the position of the respondent as host who decides terms or steers the interview. In one case this was done after the interview was over, as due to a misunderstanding the venue was changed by the woman at the last moment from the centre to her home. Maybe she felt she had better time to serve some snacks at the end of interview or she wanted to dictate terms of control for the setting. She herself said work comes first, implying that the interview should be done first, and her husband joined us with the snacks after the interview.

In some of the other interviews husbands that were present were all on disability pension and some adult children were also present at home depending on the time of the interview. The husbands did not sit down in the drawing room, or intervene in any manner without having to be told all this by me. This may be due to respect for me as they knew I was managing the centre where the women attended, having a top-down effect, or maybe as they were aware I was coming for an interview, it would be rude to intervene, or it could be general politeness to

guests, or they were not bothered with details of the interview, feeling no need for control as it was taking place in their house, by me a woman and in our language. All these were just assumptions, which I did not probe further into. One adult daughter sat and listened for awhile and left the drawing room shortly afterwards. Another respondent's adult daughter doing higher studies was at home and left the room once the interview started, signalling it was okay not to be present.This could mean that the second generation finds research appropriate, or that me being a migrant and researcher was appropriate.I did not ask about this either.

Next I proceeded with a general introduction on the present deteriorating health in the migrant community and the need for such research. My background as health worker justified my interest in the topic, and no further enquiry questions were asked by the respondents. They were interested in confidentiality and anonymity, more than the objectives of the study. This was ensured by me verbally. Up to this point there was no recording done. The tape recording started when the questions were introduced covering the themes mentioned below. The tape recording created some technical problems but no ethical problems, as the issues discussed were neither sensitive nor confidential. Tape recording was useful as it was easy to return to the tapes several times, if my notes were unclear both during the interview and later when transcribing. The themes in the guide covered aspects of their food intake, with focus on fats in general, including cooking methods. It also covered the issue of Diabetes/ CHD, migration, stress and lifestyle in general. The questions were unstructured and open-ended allowing for discussions and giving freedom to the respondent in verbalising their thoughts. Some had problems verbalising their thoughts as they said they had never been confronted with such questions.

All interviewing was done in colloquial Hindi /Urdu which is a link language in northern India and Pakistan, spoken by almost all first generation immigrants from this region. One woman replied in Punjabi, and parts of it need to be translated for me, due to my lack of proficiency in that particular language. In addition I took hand written notes alongside the interviewing, as said earlier so I could refer to them in case of discrepancies. My written notes were also written in English and some particular expressions, phases were written in Hindi for translation later.

After the initial first few women were interviewed, the later ones said they were familiar with the study, and had talked about the study between themselves that I had visited their homes to interview them and that it was neutral and harmless. My assumption was that if their

experience was negative to my questioning, at least the more extrovert ones would have objected, as they brought up complaints regarding the centre easily with me. On the other hand some might tend to think this might provoke or hurt me.

4.6 DATA MANAGEMENT AND ANALYSIS

The data organising and analysing was done by focusing on one interview at a time, reading it carefully to grasp its underlying meaning, not just substance in the text, and repeating this process several times. Next I divided the text into topics or themes, making a list of all topics. Each topic was then abbreviated and then alphabetised into codes that were written in the margin next to the appropriate segment in the text. New topics that emerged were given new codes. I repeated this procedure for all the answers. Next, I organised these topics in groups or clusters showing similarity. Topics were then sorted out into larger clusters or main topics, less important topics, and unique topics. Finally, I tried to reduce the total number of topics. Each topic was now collected in one area, and after having done so I could attempt a preliminary analysis. This was done following a pattern suggested by Creswell (35).

4.7 POSITION OF RESEARCHER

In general the use of in-depth interviews and participatory observation using the researcher's role to get information is common in qualitative research. Researcher bias can therefore be a problem in qualitative methodology as it is important to maintain closeness and distance simultaneously, being observer and being a part of the process simultaneously. I did not do participatory observation, so in-depth interviewing was my only technique of data collection.

Gubrium and Sankar have focused upon the need of having a cultural reference and framework when probing and elaborating in order to maintain this approach, and ensure validity. In addition, this approach requires inter-personal skills and the capacity to listen, absorb and reciprocate (32). This requires having some background knowledge about the sample. Having earlier worked with this group, and having somewhat the same socio-cultural background as the respondents, helped in the process. In addition working with migrant health, gave me some background knowledge. Since I was working at the centre, my interest about the focus of the study was not questioned, as most of the women and myself had earlier

participated in several seminars and discussions on migrant health. However my background could also make for bias. It was important that my role as project manager should not get mixed up with my role as researcher. This presented some challenges both in recruitment and during the interviewing. Being in charge at the centre there was a danger of me being perceived with a top-down approach by the women. I was aware that some might want to say the correct things as taught at the above seminars, but this problem was reduced by the nature of the in depth interview and the skills required in probing. In addition, being a migrant myself, it was important being aware of the danger of over-identification or "going native" or being ethnocentric. This required a critical reflection of self as a researcher as data was constructed during the process. This was something I myself also experienced during the research supervision as some of my thoughts about foods, like *ghee*, were implicit to me unlike my supervisor, making it difficult to verbalise such thoughts to my supervisor. The issue of "being blinded" by one`s own culture remained a challenge.

Further, my role as researcher being Indian, a mother and wife, implied that certain issues like food and cooking were implicit to all women including myself, and taken for granted, so that the women did not need to elaborate in detail. I was aware that this is not correct, and here I was extra observant and probed more as I was aware that in spite of common language and certain cultural similarities, there were several important differences in background and culture. Being urban, professional, working mother, now student, minority, non-Muslim, was in contrast to most of the women who were from rural background, non-professional, non-working, and Muslim. Apart from being aware of such differences when probing these differences turned out to be to my benefit as well as there was less danger of breach of confidentiality as I was an "outsider". In addition with my background I faced limited language difficulties.

When doing this type of research it was important to be aware of ethical pitfalls as well. Gubrium and Sankar have implied that an ethical dilemma that may arise is the strong reciprocal bonds created between researcher and respondent. This may create obligations for the researcher after the study is completed especially when dealing with weak groups like elders, ethnic minorities, or other marginalized groups. Some saw an opportunity to voice their marginalisation in Norway in addition as a part of the interview process. I listened, but did not oblige myself to pursue such issues about discrimination as they did not apply to the focus of this study. This I explained to the respective respondents.

4.8 ETHICAL CONSIDERATION AND CLEARANCE

Before starting the study ethical clearance consent was granted by the regional ethical committee in Oslo. The study was performed in accordance to the Helsinki Declaration. In doing field research, there is a great deal of involvement in the personal lives of the respondents. This may create an ethical dilemma. It was important therefore that I ensured providing the whole truth about the nature and type of my study to each individual respondent. I also explained that there were no financial rewards or gains for participating. After this a written informed consent was taken from the respondent which also ensured confidentiality. Some of the women signed without reading the content, which was verbally translated by me. For the ones who were illiterate and could not read, I read the text in English and then translated it verbally into Urdu before they signed. Confidentiality about the information was ensured by me verbally. The issue of maintaining confidentiality remained a challenge, due to the small size of the sample and the fact that the women belonged to a small tightly knit ethnic community. However after the initial reservation and being on guard, they seemed more relaxed as we probed more into less sensitive issues like diet, health and lifestyle. Withdrawal from the study was uncomplicated, as the ones who agreed to participate agreed voluntarily, and by using a single approach method, there was no need to follow up with repetitions. All names, addresses, ages were kept totally confidential by me, as all data generated belonged to the study and would be looked after by me. All written information including tapes were kept in a locked drawer. As a part of the ethical perspective of this study I felt it was also important that the women be given some feedback about the findings and results at the end of my study and not be left ignored. This I intended to do after the study was completed.

5. RESULTS AND DISCUSSION

5.1 INTRODUCTION TO RESULTS AND DISCUSSION

This chapter will focus on the results and discussion of the main findings pertaining to perceptions and practices of dietary fat intake in the womens diet. As several of the women in the sample had poor health, having either Type 2 diabetes and/or CHD (see sample), I wish to introduce this chapter by focusing on the womens perceptions of the reasons for their poor health. This will be followed by the main discussion on dietary fat intake which is divided

into two parts. The first part deals with cooking methods and cooking medium. In this part I will discuss post migratory cooking methods and discuss reasons for the preference for certain cooking methods. Here I will also discuss the selection of cooking medium which involves the intake of *ghee (clarified butter)* and plant oils. I have chosen to start with cooking methods as it provides a backdrop and general context to the Asian kitchen. The second part discusses food selection and here I will deal with why certain foods were preferred and selected for consumption. For the purpose of analysis, I have chosen to break down food selection into daily and non -daily foods involving the private and public sphere respectively. I will start by discussing daily food intake in the womens private sphere involving living arrangements which included husbands and adult childrens food preferences as well. Next I will look at the intake of non-daily foods in the public sphere involving the womens community and socialisation patterns. Such a bonding can be termed as "external" context having implications for lifestyle choices. I will end this chapter with a conclusion of the two main parts followed by a discussion of what implications such type of fat intake may have for public health and the need for intervention.

5.2 PERCEPTIONS OF THE REASONS FOR POOR HEALTH

When exploring the reasons for poor health the women felt that their poor health to a large extent was due to reasons outside their control. In addition to lifestyle factors like diet and physical activity, other reasons given were related to body imbalance and lack of sweating with roots in traditional medicine which formed a part of their "internal" context or was implicit to them.The role of religion and fatalism were also perceived as important factors. In addition the role of stress and physical inactivity were also mentioned. Such reasons were perceived as an additional burden to the natural biological process of ageing and weakening. I will briefly dwell upon some of these reasons. Several of the women perceived that body imbalance and lack of sweating due to living in a cold climate like Norway was a major reason for their poor health. One of the women Shazia related the problem of her being overweight to the lack of sweating. She narrated:

"This is cold place and we don`t move around much, keep sitting inside the house, sweat is not released".

Such perceptions had roots in traditional medicine. In Asian traditional medicine like Ayurveda or Unani- tibb the body consists of basic humours or substances such as air, water, fire, bile, phlegm. Such “humoral“ conceptions are based upon an ecological flow or body balance of substances between the human body, environment, and food. Imbalance of these humours can lead to disease. This includes the emission of sweat as well (36). Such thinking was reflected in a qualitative study of British Bangladeshis done by Greenhalgh that showed that the emission of sweat to maintain body balance was important to Asians who tend to perceive the lack of sweat as a cause of illness (37). The emission of sweat can be related to the emission of toxic matter in the body similar to the emission of impure breath, urine, and other body wastes (38).

The properties of food played a role as well. Traditional medicine emphasizes the use of flavors and tastes to adjust the imbalances which contribute to disease. The choices of foods and the manner in which they are prepared are considered to be important when choosing a diet to improve or maintain health. Skillful use of warming and cooling spices and herbs contribute to the appropriateness of the meal to correct the root causes of imbalances.Each ingredient in a meal affects the heat or cold balance of the body differently and may also influence factors of the humoural system. The tastes, salty, sweet, bitter, pungent, and sour also affect the humoural system. The aromas which are given off during the preparation and cooking phase, as well as those emitted during the consumption of the meal, contribute to the healing benefit of a well conceived meal. It is in this way that Hippocrates intended physicians to "make food your medicine". It has been suggested that such “humoralist” understanding is more likely to be dominant in the first generation migrants than the second generation (39). This will be left to be seen in the future for the next generations.

The women tended to categorise foods into hot/cold foods. When exploring briefly further, examples given of some “cold” foods were buttermilk, rice, vegetables, onions and bananas, while examples of “hot” foods were *ghee*, meat, fish, eggs, wheat, milk, garlic. To exemplify further, when treating a “hot “illness like diarrhoea it was important to consume “cold” foods like rice and buttermilk one of the women suggested. When asked where she had gotten such knowledge she implied that such knowledge was implicit and learned orally from the older generation of women in her household. Helman has also dwelled upon this hot/cold dichotomy of foods in traditional medicine, implying that this has to do with the effects of

foods, not its temperature (40). In the case of Diabetes, high intake of sweet and fatty foods was mentioned as a cause by some, but not all the women were convinced that sweet and fat intake alone was responsible for Diabetes. Stress and weakness were also given as reasons. Stress was related to the present modern day concept of stress, while weakness was related to one's constitution by birth of being weak or strong which could not be controlled by lifestyle changes. One of the women Azma said:

"I never ate much sweets or parathas (fried chapattis), so Diabetes and illness does not come from eating these foods. It comes from weakness and from stress."

The womens narrations further revealed a fatalistic attitude to the cause and cure of illness in general with roots in religion. One woman Alia said:

"Illness is not in our hands. All in the hands of Allah. What Allah has meant for us will happen. Through diet we can only reduce it. If Allah wants it finished, then it will be- but not in human hands, as humans cannot cure oneself. Doctor tries (koshish), but if Allah wishes (manzoor) only then it works. We believe Allah has it all written out and listens to our prayers. We don`t pray to be cured of one or two specific illnesses- but for general good health. This is not in hands of the doctor."

Her fatalistic attitude implied that illness cannot be cured by humans, without Gods will. In her thinking illness could only be reduced but never be cured as that was in Gods hands alone. Despite such thinking, like several of the other women, she admitted that diet could help reduce the impact of illness and was motivated to make lifestyle changes. Greenhalgh`s study mentioned earlier revealed similar findings showing that most respondents in that study were motivated to alter diet and comply with treatment (37). In other words, motivation to change was not the problem, but other barriers that were specific for this ethnic group needed to be identified, which I have attempted doing in my study.The role of physical inactivity was mentioned by several. They felt in general it was difficult to be physically active in Norway due to barriers like external cold climate, lack of gender segregation, lack of information about existing facilities.

One woman Safia said:

“Cannot be healthy in Norway due to the cold. Norwegians don`t get effected by the cold as they are born here, while we come from hot countries. Our people don`t go for walks outside like them. I don’t know about next generation as they are born here, but they also don`t go for walks etc. They train in gyms, do solarium. No cycling either, only do cycling as children. Our people don`t think cycling is ok, use only cars. They walk less. At least I walk a bit ".

5.3 ADVICE ON DIETARY CHANGE AS UNDERSTOOD BY THE WOMEN

Having given a brief introduction to some of the reasons related to their poor health as perceived by the women, I will now proceed to the role of diet. One of the women Alia felt that diet could help reduce the impact of illness and was motivated to make changes similar to others who experienced poor health themselves or in their close family or spouse or network of first generation migrants, along with the general high prevalence in the community. The women were asked to identify what changes concerning diet had been recommended by the health professional and which they understood and implemented. The recommendations as understood by the women seemed to be of a very general nature. They understood that it was important for them to make lifestyle changes by being more physically active, and reduce fat and sugar intake in general. The dietary advice as understood by the women could be summed up as the following:

- *to consume less sugar*
- *to consume less fried foods and use vegetable oils*
- *to consume more white meats*
- *to consume more foods of plant origin*

The above recommendations were in conjunction with findings that showed that in both adult onset Diabetes and CHD the risk of disease or condition could be reduced by changes in diet and lifestyle (41).According to the women, the recommendation to consume less sugar was not perceived as a problematic intervention. Earlier I have shown that one of the women Azma perceived Diabetes as not only related to sugar or fat intake entirely, but to factors like stress, lack of sweating or body imbalance, and old age weakness in addition. In contrast to

Azma, one of the other women called Rehana, had a different opinion as she felt that Diabetes does comes from sweet intake. She reflected:

"there is no remedy for 'sugar'(Diabetes).The only treatment is to stop eating sugar as it comes from eating sweet foods and mithai"

When exploring this further, Rehana focused on the lay word for Diabetes in Urdu where it is called "sugar" associating Diabetes as a "sweet illness" with avoidance of sweet foods in general. This seemed to be a more common perception. Several of the women especially the Diabetics had made changes at the general level as they had started using artificial sweeteners and stopped using white sugar in tea. In addition, several had stopped buying traditional ethnic sweets, containing *ghee* and sugar which I will refer to as *mithai* for the rest of this study (*See glossary for the meanings of these and other Urdu vernacular words for the rest of this study). Mithai* was now restricted to special occasions which I have discussed later under the role as hostess and guest. By doing so, they felt they had taken the necessary measures to combat their Diabetes. It did not involve the issue of fat directly, unlike the remaining recommendations. I will now move to the remaining dietary advice as understood by the women which involved fat intake which forms the main focus of this study.

5.4 COOKING METHODS

5.4.1 POPULAR COOKING METHODS

During the course of the interviews the women narrated that presently all food was cooked mainly as curries, or was fried, making such methods popular cooking methods. They narrated further that this was similar to methods employed before migration. Methods like roasting had also been employed to some extent after migration and some had also attempted baking certain foods like fish. Often such roasted or baked foods were eaten as a side dish in addition to a curry. Roasted foods were also eaten as starters before a main meal or as snacks. Woking was seldom used. The least popular methods remained boiling and steaming as they seldom or never ate boiled or steamed foods. The most popular method was the preparation of curries called "saalan" in Urdu. A curry was cooked slowly over a long period of time and contained either lamb, beef, or chicken along with spices, fat, and salt. Such curries were

freshly prepared and served hot. Vegetables or lentils could also be added to a meat curry. A curry could also be prepared without meat with only vegetables and was called a vegetable curry. Likewise lentils were also boiled in a soup form and garnished in a fat base using *ghee* or oil and took the form of a lentil curry. Such vegetable and lentil curries were earlier eaten almost daily before migrating, being a part of their staple diet. After migrating, vegetable and lentil curries were seldom eaten being replaced by pure meat curries. Of late vegetable and lentils had been re-introduced in their diet to some extent as they were being added to meat and prepared as a meat curry. I have dealt with this issue of meat later under food selection.

Frying was another popular method. This involved both shallow frying and deep frying. Examples of shallow frying were vegetables that were fried or sauted in oil or *ghee* called *subzis*. Meats were also shallow fried as patties or *kebabs*. Deep frying was another popular method when preparing ethnic foods or snacks like *samosas, pakoras, pooris*.Presently some of the women had started roasting or baking foods as they now had access to electric baking ovens unlike before migration where baking ovens were uncommon in private homes, using open coal, gas, or oil stoves to prepare foods. Traditionally such methods as roasting or baking were not common as daily food as such methods of food preparation were associated with more festive and expensive foods like tandoori meat dishes and meat *kebabs* that are baked in open clay ovens called tandoors using charcoal. The women narrated that methods like roasting and baking had been recommended by the health professional as they limit fat content. At the individual level, however such changes were variable as excess fat, spices, butter or margarine and salt were still being added generously to the meat or fish dishes as marinade or as a sauce.

5.4.2 REASONS FOR POPULARLY USED COOKING METHODS

The above popular cooking methods like preparing curries or frying of foods, have also been described in other migrant studies. A health survey of ethnic minorities linked the high intake of curries, a prominent feature of South Asian cooking to the high rates of Diabetes/CHD in U.K South Asians. The reason being the excessive use of *ghee* and cooking oils used in preparing curries (42). This particular survey also revealed that amongst ethnic groups there was a variation, with the Bangladeshis Muslims, having the highest fat intake as they consumed red meat with high saturated fat content made as curries, six or more times a week.

Yet another UK study showed that amongst South Asians, apart from curries, another common cooking method was frying (43).

Concerning my study, the reasons given by the women was that methods such as preparing curries or frying were similar to traditional methods of cooking before migration, making them familiar methods and easy methods to employ. They narrated further that knowledge of such methods was gotten from the older generation of women in their households like mothers, aunts, sisters, mother-in laws and they took great pride in maintaining such traditional cooking methods. When discussing further the reasons for the choice of such methods, the women implied that foods prepared in this manner, particularly with regard to curries that were well cooked with spices and fat over a long period of time made the food edible and digestible. In addition this cooking method gave food the correct taste, colour and consistency. Another reason given for the intake of curries was associated with the intake of traditional Pakistani bread made of flour called *chapattis* that were eaten daily in most households and needed a gravy from a curry. *Chapattis* were also eaten with a vegetable curry or lentil curry or just with fried vegetables without a gravy called a *subzi*. In addition a curry contained several spices like *saffron, cumin, garam masala,* coriander which they implied were important to use for health. Such spices could not be sprinkled on top of prepared foods like herbs but had to be cooked for a long time to bring out its properties, taste and flavour.Such reasons applied also to fried vegetables to a large extent. However the spices used in a *subzi* were different than for curries.The issue of baking as a cooking method was acceptable as it complied to traditional cooking methods like tandoori baking, a form of traditional baking common in Pakistan which is done in clay or earthen ovens with charcoal fire. Even though baking was perceived as an acceptable method, it was not frequently used for daily cooking by the women as it was still mostly associated with festive food which is time consuming and eaten for festive occasions. As mentioned earlier, less frequent methods were boiling or steaming. The women seldom or never ate boiled or steamed foods like boiled vegetables or steamed fish. Eating boiled food in general was unsuitable as perceived by the women as it lacked spices needed for health.

Below I will attempt exploring the perception of digestibility further. According to the researcher Kelleher, a perception can be summed up as an expression of attitudes, beliefs, and ideas (39). There was a general perception that food should be well cooked along with spices to be digestible. This included all foods of animal and vegetable origin. In a study of South

Asians which I have referred to earlier, it was revealed that baked, boiled, or steamed foods were difficult to adopt by Asians being perceived as indigestible (37). Helman has also focused upon this notion, suggesting that raw or boiled foods are perceived as indigestible in traditional medicine (40). According to Helman this perception is linked to yet another categorisation of foods based on traditional medicine, which labels foods into weak/strong foods. The women labelled foods into two categories termed "pukka" or "kaacha" foods which were related to digestibility, edibility and methods of cooking. This was further related to notions of purity/impurity as "pukka" foods were foods well cooked, being insulated from impurity or pollution, while "kaacha" or uncooked foods were vulnerable to impurity being cooked without fat like rice and *chapattis*. In other words food cooked well either as a curry or fried made the food "pure". In the womens context, boiled or steamed foods which did not contain fat or spices were suitable for elders, sick and babies with weak digestion. This was in contrast to strong foods that provided nourishment. One of the women, Tasreen was clear in her attitude to boiled foods, in this case boiled fish as she said:

"Earlier I made fish as curry, now I sometimes bake it, but never eat it boiled."

The perception of food being well cooked over a long period to be digestible applied mostly to the adult first generation, and was now being challenged by the second generation. Several of the women experienced this conflict as they all had adult children living in the same household. One of the women Alia said her adult sons suggested boiling or steaming food and omitting fats altogether. The children had adopted such perceptions by interacting with the host population. This was difficult for Alia as in her perception boiled food without fats is incorrectly made and indigestible she felt. She did not trust her son's judgement entirely about such an important issue. There was however one woman, Rehana, who had experimented with boiled foods, in this case boiled fish. This occurred only once as one of her adult sons had tasted boiled fish once outside the home in a restaurant and wanted her to make it at home. Her attempt failed as it was not perceived as tasty or digestible by her or by her family. The attempt was never repeated.

In the case of using a wok for cooking, most of women said they were unfamiliar with cooking methods like woking. Several had never heard the word before either. Unfamiliarity with a wok was not entirely correct as woks are similar to cooking utensils called *karhais* commonly used in Pakistan. When I confronted them with this, they implied that such cooking vessels or *karhais* however are only used for making vegetables curries or fried

vegetables, never meat or lentil dishes for which deeper pots are used. One woman Rehana knew what a wok was, but said it was unsuitable for her cooking. She related this to her large size of family and the general small or limited size of woks as daily large quantity of meat curry was made in the household.

5. 5 CHOICE OF COOKING MEDIUM

In the Indian subcontinent, in general there are several alternatives to choose from when selecting a cooking medium. These include refined and processed plant oils as well as *ghee* or clarified butter, a commonly used saturated fat used in Asian households. *Ghee* can be of two types. Pure *ghee* called ”asli *ghee* “ is made from cows milk or pure butter and is an expensive commodity being affordable only to the rich. Other alternatives are available like hydrogenated *ghee* made from plant oils. This *ghee* is called *dalda,* or vanaspati *ghee,* which tends to have the same thick consistency as pure *ghee*. In addition, commonly used plant oils are mustard, corn, peanut, sunflower, coconut, and canola oils. Below I will look at the womens choices of cooking medium especially after migration. I will start with exploring *ghee* intake and later discuss intake of plant oils.

5.5.1 INTAKE OF *GHEE*

I wished to explore the issue of fats in a socio-cultural context, especially with regard to *ghee*. When referring to their present *ghee* intake, the women in my study were referring implicitly to pure *ghee* which most people from the region which the women belonged to are familiar with.The findings showed that the intake of *ghee* was high after migration as it became the main cooking medium in the womens households. Studies from other settings show similar findings. An earlier mentioned a study by Lip et al. also showed that amongst UK migrants *ghee* consumption was high in the Asian group along with butter, eggs, and milk (43). Henriksen`s study from Norway did not comment on *ghee* intake, but showed that there had been an increased intake of fats, full cream milk, butter, margarine, sugar and meats in general due to improved socio-economic status and easy availability (22).

When asked to describe their *ghee* intake the women narrated that before family reunion, in the early post migratory phase, *ghee* intake was negligible, as then single, young, migrant

males who had to do their own cooking, used mostly margarine or plant oils as it was the cheapest cooking medium and they had limited finances resources then. In addition, the males lacked knowledge on how to make *ghee* at home. Neither was *ghee* commercially available in those days. Later on, after family reunion, the women who were then newly arrived wives started making pure *ghee* at home from butter and fullcream and using it as the main cooking medium for all types of cooking apart from frying. Cheap, cooking plant oils were used only for deep frying of ethnic snacks which I have dealt with later under plant oils. In the absence of *ghee*, other saturated fats like butter or margarine were used as substitutes. One of the women Shazia had good knowledge on making homemade *ghee* as she was familiar with this process from before migrating. She described how back in Pakistan, her family kept a buffalo and was considered well off. The milk was used to make butter and *ghee* at home. *Ghee* was made by cooking butter over low flame until all the milk fats settled at bottom, then straining off the clear liquid, a time consuming process. There was status attached in using this homemade *ghee* to prepare fried *chapattis* or *parathas* which were eaten daily along with milk she described. *Ghee* was also used for cooking sometimes but not always as it was a coveted and expensive food item. Plant oils were used then as an alternative. After migrating Shazia continued her practice of making home made *ghee* now using large quantities of commercially bought butter or full cream to make *ghee* at home. Margarine was also used for cooking. This practise of preparing and consuming homemade asli *ghee* was a common dietary habit in most of the womens households. Later *ghee*, both from animal and vegetable fats became commercially available in ethnic stores being imported from ethnic outlets in UK. In addition, *ghee* from animal fats was also being commercially produced by Tine Dairy in Norway.

When exploring their reasons for *ghee* intake, the women reflected that *ghee* was perceived as providing perfect nourishment. In addition it gave correct flavour and taste to foods making it the best cooking medium. Concerning the issue of nourishment, a study from the Indian subcontinent showed that perceptions of what constitutes good nourishment was closely linked to the high preference for dairy products, in particular highly saturated *ghee* (44). In my present study, this coincided with the womens perceptions as well as they implied that *ghee* was a status food which provided perfect nourishment, reflected in its high consumption after migrating. Helman suggests that in traditional Asian cultures, food is considered inferior if *ghee* is not consumed as it enhances the nutritional value of other foods (40). By adding it on top of cooked lentils and enriching the food, it provides nourishment. In addition it provides correct taste and gives a silky smoothness to the texture. Other literature

also supports the perception of *ghee* as a superior food providing physical and mental renewal, giving resistance against disease, providing longevity, intelligence, and being used to remove toxicity, insanity, obesity, fever, heal wounds. Swallowing a teaspoon of *ghee* every morning is like taking a vitamin pill according to Svoboda (45). Such qualities matched the women's perceptions to large extent as well. In addition, for them *ghee* intake was also linked to high socio-economic status as it was traditionally used by the rich and upper castes to symbolise purity and wealth. Such thinking persisted in their minds after migrating.

The women`s *ghee* intake remained high after migration especially in the late 1980`s and mid 1990`s after which there was a marked change. Due to failing health they were forced to reduce their intake as recommended by the health professional. The message they understood was to reduce saturated fats like butter and margarine as the health professional did not use the word *ghee* being unaware of the word and unfamiliar with *ghee*. Instead, they were recommended to start using plant oils as a cooking medium, which the women gradually had done to some extent. The issue of plant oils I have discussed later. Even though the general quantity and frequency of *ghee* had been largely reduced, it had not been entirely dismissed the women admitted. It still was perceived as a special high status food. Despite the switch to plant oils, for most of the women to still have *ghee* available at home remained an integral part of their household, symbolising quality, purity, wealth and good house keeping skills. It was still considered both a symbolic food and a source of nourishment even though it was no longer used as main cooking medium unlike earlier.

I shall use the case of Shazia to illustrate how she adapted to the changing usage of *ghee*. She lived in a multigenerational household with adult sons and unmarried daughters. Both she and her husband had Diabetes and he had a heart condition in addition. Her coping strategy, similar to several others, was now to reserve *ghee* for special foods and to make a distinction between adult and childrens food as she now made *parathas* for children with *ghee* and with plant oil for the adults. A dash of *ghee* was added to the children's prepared food like rice or *khidchri* or added to their *chapattis*. In addition, *ghee* was used in the seasoning of lentils, the few times lentils were eaten. This was done to ensure nourishment, taste and texture. In addition, *ghee* was now reserved for festive foods like *biryani*, *zarda* and *pulao* to provide correct taste. Such festive foods were traditionally eaten on festive occasions, but now such foods were frequently consumed by the whole family especially in the weekends both when entertaining guests in the private sphere as well being a guest as in the public sphere.

Another woman Safia, had also introduced this general level change but with a gender component. She also prepared *parathas* with *ghee* for her children to secure their nourishment, but implied that in her particular case the belonged. Her old age depended on raising strong and healthy sons. This maintained the status the nourishment of adult male sons was most important. Her first priority was her sons' nourishment, as she often referred to her sons' health and not daughters during the interview. Her young teenage daughter was also served *parathas* but more for taste and flavour and less for nourishment she implied. For her the importance of her sons' health was vital as traditionally daughters are married off, leaving sons to take care of parents in old age in a patriarchal society to which she belonged.This maintained the status of *ghee* as a gendered food. Alia shared the same view as Safia. She however only had sons. When confronted by me as to whether *ghee* could be risky for her sons` health she maintained her position about the nourishing property of *ghee* and did not perceive it as a risk for the health for her sons. In fact, she expressed concern about her adult sons getting malnourished as they had suggested consuming less fats in general including less *ghee*, butter, and margarine. Alia said about her adult sons:

"They are big now and are well informed and know what is good or bad food. Children say to eat more chicken and to drop *ghee*. They *don`t use butter on bread. They say even drop the oil. But can`t do that as food is not correct then. For health these things are also needed. I keep telling my children, butter is also needed by the body, as they exercise a lot, and they need fat. Sometimes they eat parathas (fried chappatis) with ghee-otherwise all they get is some oil from the food, which is not enough"*

She trusted their judgement but only up to a certain point and had introduced changes as she started using plant oils for daily cooking, but she felt uncertain about this change. Her sons frequently exercised and trained in gymnasiums and required extra energy. She felt the main source of energy her sons were getting was from plant oils now and that was not providing proper nourishment, as energy from animal fats like *ghee* and butter was healthier in her thinking. She felt her sons' health would be at stake if she omitted such foods from their foods. Their growing up into strong healthy men depended on animal fat intake, which was provided by meat and *ghee* intake. By conforming to such practices she was not risking her social role as parent or getting labelled as careless mother. For her, boundaries were essential to maintain, when introducing changes.Such thoughts were similar to several of the other women.

5.5.2 INTAKE OF PLANT OILS

The increased intake of plant oils was also seen in Dhirad`s study as mentioned earlier. The women narrated that the most commonly used plant oils for cooking were processed, refined low cost oils like sunflower, saffola, and corn oil. Plant oils were used for making daily foods like meat curries or frying vegetables. In addition they were used for shallow and deep frying of ethnic snacks similar to before migration. Along with plant oils, margarine was also used for frying and it was also used on bread. However bread was eaten in limited quantities as bread was not so popular with the women. Rapeseed oil was used by one woman who said she used salad oil which contained rapeseed oil even though she was not familiar with the word rapeseed. But she showed me the bottle where it was declared rapeseed oil in the contents. She said she had started using rapeseed oil of late as it was recommended by the health professional due to her Diabetes. She admitted she had no knowledge of either content or the specific qualities of rapeseed oil.

The issue of quantity was a concern however. Several of the women admitted they often bought large quantities of such plant oils especially from ethnic shops. Large cans containing 5-10 litres of plant oils were commonly bought and stored in the house, as the women said their consumption was high. Cans were often bought when on sale and hoarded, along with crates of soft drinks, and large quantities of white sugar and white flour. This was done for economic reasons, and high consumption and convenience. In addition to using plant oils for cooking, the women narrated that oils were also used externally for skin, hair, body massage and medicinal application purposes. Examples of such plant oils were mustard oil, coconut oil, amla(*Indian gooseberry)* which were bought in ethnic stores. I will not explore this external usage of oils, as my study pertains to plant oils in the context of cooking.

When exploring their choice of plant oils, perceptions based on knowledge that was implicit to the women with roots in traditional medicine emerged to some extent in their thinking. This was reflected in the varying properties based on the hot/cold classification of foods in traditional medicine. According to this classification, most foods including plant oils are classified as hot or cold. For example *ghee* and olive oil were considered heating, while coconut oil was cooling. Based upon this classification the use of plant oils was restricted to specific purposes to get the desired effect of its heating or cooling property. In general there was a common perception that plant oils did not congeal in the body, being fluid or liquid as expressed by Safia. This was a perception shared by several of the women. Despite having

some knowledge about the hot/cold classification pertaining to plant oils, they expressed no rigidity about the issue, saying they were using what was recommended by the health professional. In addition, plant oils such as sunflower, saffola, and corn oil were cheap and easily available, making the decision easier. They seemed far clearer in their position about the classification of *ghee* and olive oil, coconut oil, and mustard oil.

In contrast to traditional medicine, in biomedicine oils are classified based upon their chemical composition as unsaturated fats are opposite to saturated fats like butter, *ghee*, lard (29). Further, in biomedicine, plant oils are generally considered a healthy alternative as they have less saturated fat and less cholesterol (46). When confronted by me upon such classification or terminology or the use of words like “saturated”, “unsaturated” or “cholesterol”, the women implied that such words were not familiar to them. Some said they had heard such words before but did not know its meaning and thus having no importance to them.

Despite the switch to plant oils, the women were not convinced entirely of the nourishing quality of plant oils making it a better alternative. This was expressed by one of the women Rehana who felt that vegetable fats gave poor nourishment, unlike nourishment from animal fats. She stated:

“Ghee is butter while margarine is from vegetables. Animal fat is better than vegetable fat as it has more vitamins and more fat. My sons exercise a lot and need fat.”

In addition to conflicting perceptions between the women and the health professional, about the issue of nourishment from plant oils, there were other problems as well related to their oil intake. Below I will discuss some of these aspects. The plant oils used by the women as described above were mostly relatively cheap, refined, cooking oils. This involved modern processing, refining, and heating methods, including the use of solvents and bleaching which are commonly used to extend shelf life and to give a golden colour. Margarine is an example of such a heating process as a butter substitute. Such methods are considered harmful as healthy essential fatty acids get destroyed when oils are heated at high temperature with solvents and bleaching. Studies have identified that essential fatty acids help to prevent hypertension and obesity (47).

Other problems associated with plant oil intake was the excessive intake as generous quantities were used for making daily foods and to prepare shallow and deep fried festive snacks like *samosas* and *pakoras*, and french fries, which was a common feature in most homes. The women narrated that such plant oils were seldom thrown away, being used and reused over a period of several weeks and months. This practice applied in particular to deep frying snacks. The women were aware that this was not a healthy practice, but felt they could not afford to throw away such large quantities of oil after a single use. This was a common practice in most households. This reuse of oils created yet another health risk as such reuse could increase content of trans fatty acids which are considered harmful for health (48).

Apart from the reuse of oils, the women did not perceive the issue of quantity as a problem or harmful for health when discussing this issue. Some hinted that their consumption might be high but did not see it as a problem as it remained a non issue for most of them. During the interviews several of the women spoke of the importance of having good cooking skills which was an essential part of their identity as a skilled housewife and hostess. When discussing the issue of quantity, there seemed to be less awareness about this issue as none of the women measured their oil usage when preparing foods. Such a practice could be a barrier to their cooking skills. They implied that foods needed to be measured only when using recipe books which are seldom used in Pakistani households as all knowledge is orally transferred or learnt by observation.They trusted their cooking skills from earlier, where foods were never weighed or measured or made from written recipes using "*andaza*"or own judgement as such knowledge was passed down to the next generation by the older women to the younger women. The issue of measuring quantity was a non issue for them. In fact measuring would imply poor cooking skills or lack of good judgement in such an oral culture. One of the women, Rehana, described her practice of using a ketchup bottle filled with cooking oil. She said:

" I put oil in ketchup bottle and use. Earlier I used to ring up my husband at our shop and ask him every week to bring home one can of oil".

She had no control over when last time the bottle was filled up. Neither was the issue of expiry dates an issue for her. Her daughter-in- law helped with the cooking, but Rehana decided to a large extent choice of foods and method of cooking being the eldest woman in the household. When confronted with the issue of expiry dates of such food products, she did not perceive it as problematic due to the high frequency of rotation or usage in her household

she said. Her perception was that measuring quantity was a non issue, as all her life she had never needed to measure foods when cooking, and she trusted her judgement. To start measuring would challenge her cooking skills which was an essential component of her identity as housewife. By switching to plant oil from *ghee*, shows she was following health professional recommendations up to a certain point, but by not using standardised measures, she was maintaining her identity and cooking skills as a skilled Pakistani housewife, as she felt that only untrained women or ones who lack cooking skills need to follow recipe books or measure exact quantity. By not using standard measures she took a standpoint, keeping a balance of power between herself and health professional.

Apart from the plant oils discussed above, I wished to explore the use of olive oils, as several of the women implied that olive oil had been recommended by the health professional. The findings showed that some of the women had tried olive oil but none of them presently used olive oil for daily cooking. Others had never used it like in the case of Safia. One woman Alia had been considering using olive oil, as she had heard from health professional that it is good for health with less fat, but had not done it so far. But she had taken the step of buying it and keeping it in the house with plans of trying in some day in the future. This gave no guarantee for use in the future. Shazia, a Diabetic who also had a Diabetic husband had earlier used olive oil but omitted it now. Like the case of Rehana mentioned earlier, her husband also owned a food shop and could have taken any type of oil home from their grocery shop if she perceived it as a healthier choice having easy access to it. She had now reverted to sunflower oil from olive oil. For others, price was a barrier as olive oil is expensive in general compared to other plant oils, and cold pressed or extra virgin which is considered superior quality and health promoting is the most expensive. Due to large quantities required by the women, other cheaper oils were selected making olive oil an unsuitabale choice.

Apart from high price, there were other barriers as well concerning non usage of olive oil. One such barrier was conflicting perceptions between health professional and the women about the properties of olive oil. In the womens context based on traditional medicine a general perception was that olive oil is heating which could lead to itching or give rash or eczema. Shazia felt olive oil was best suited for Europeans, especially South Europeans as their body is adapted to that type of oil making adaptability and natural environment an issue. Like mentioned in the findings she had earlier used olive oil, but now omitted it altogether due to its heating property.

Shazia said:

“Earlier I used all types of oil, even olive oil. now we only use sunflower oil – not olive oil,which is heating. Khoon me tezi aa jati hai”- the blood rushes faster (literally translated).

In addition olive oil was perceived as being unsuitable for cooking at high temperatures when making curries or frying foods. This made it easier to implement in Norwegian cooking which traditionally uses lesser oil and has different cooking methods than Asian cooking, Shazia felt. Another factor that restricted usage was that it was perceived as having unfamiliar taste by her adult children. The issue of taste was linked to childrens preferences making living arrangements an important determinant to food choices. This was confirmed by others as well as one of the women Rehana added:

“I use cooking oils like sunflower or mix vegetable oils. Don`t use olive oil, as children don`t like taste.”

The above mentioned barriers made the use of olive oil unsuitable and difficult to implement. Several of the women said they agreed to using olive oil when confronted by the health professional, but did not comply with it. The hierarchy of modern biomedicine along with the lack of knowledge of traditional classification of foods by the health professional, along with additional language barriers made it difficult for the women to communicate or discuss such issues with the health professional.

To conclude, from the womens viewpoint, the general perception was that it was easy to switch to plant oils as such oils were a familiar cooking medium from before migration and were a cheap alternative, making price a determining factor to change. Last but not least such a change was invisible and did not influence the selection of raw materials used in cooking like choice of meat foods. Neither did it interfere with their cooking methods as all food was made as curries or fried foods. However, I have shown that the switch was not so unproblematic after all, posing a health hazard as it now led to increased high total fat intake due to the factors discussed above,keeping in mind that *ghee* was still being used along with plant oils presently. Having discussed cooking methods and cooking medium, I will now move on to food selection.

5.6 FOOD SELECTION IN THE PRIVATE SPHERE

In this chapter, I will discuss foods eaten in the private sphere and later in the next chapter discuss food eaten in the public sphere respectively.I will focus upon the intake of meats, both red and white meats and vegetables and lentils in particular.

Food in general may be differentiated into daily food as opposite to non-daily food. When exploring this distinction further, the women implied that daily foods were generally eaten in the context of the immediate family in the private sphere involving their roles as wives and mothers. Non-daily or festive foods on the other hand, were consumed in the public sphere, in the context of the community involving their roles as hostess and guest. The women narrated that they seldom ate meals with the whole family gathered around a table like in a Norwegian household. Meal times were not always regular as some had husbands or sons doing shift work. Few of the husbands were presently employed, being retired or on disability pension. A general feature was that the males tended to be outside the home much more than the women who along with the daughters tended to be more at home especially in the evenings. In the case of adult sons some of the women described how they served complete hot meals or snacks like pizza,fish fingers, burgers, *kebabs* at varying times to suit their adult sons who were often on part time jobs, or outdoors with friends, or training in studios in the evening. I have chosen not to dwell further on meal patterns.

Food can have several functions. Apart from food being a general substance to alleviate hunger, food is also used to express cultural identity, beliefs, status and power (38).The authors Pelto and Vargas have focused on this issue further by implying that food selection is not just a matter of free choice, but is influenced by factors like household structure and ideology, socio-economic status, time, resources, and availability. They have conceptualised a food system as composed of two basic components. The first is the material component, that is available food and technologies that support procurement, transport, preparation, consumption. The second component is socio-cultural, that is the ideology related to food, which defines edibility and when, how, why and where specific foods are eaten (49).My study focuses on this latter aspect dealing with the socio- cultural aspects of food selection.

I will start by explore this further by going back to the early days of migration shortly after family reunion, when the women were newly arrived wives in the mid 1970`s and early 1980`s. The women narrated that in those days despite them doing all the cooking, food

choices were determined by their husband`s food preferences. The women selected, prepared and ate food that the husbands preferred. When asked which foods they selected they mentioned mostly foods of animal origin like meat, eggs, chicken and fish, along with dairy products like *ghee*, butter, cheese, full cream milk to name the most important ones. Meat tended to be eaten as often as possible. For many it was eaten daily.Meat eaten was mostly lamb, and beef, while chicken and fish were not selected as frequently as meat then due to high price in those days. Attention was given primarily to the distinction between *halal*/*haram* as only *halal* meat which was ritually slaughtered following the rules in Islam was selected. *Haram* food on the other hand, was religiously taboo and avoided. Meat was prepared as traditional meat or mince curries using *ghee* as the main cooking medium during that period. *Kebabs* were also popularly eaten. Such meat curries were often accompanied with fried rice called *pulao*, or fried *chapattis* called *parathas* or plain un-fried *chapattis* to which a dash of *ghee* was added on top. In addition, commercially bought white cheese and other dairy products like full cream milk, cream, butter, margarine, full cream yogurt(kefir, sourcream) were frequently used being cheap and easily available in local grocery stores. This was complimented with frequent intake of fried snacks, like *samosas*, *pakoras*, and full cream milk tea, chips, to mention some popularly eaten snacks. In addition soft drinks, biscuits, both sweet and salt were common foods too, along with traditional sweet desserts like *halwa*, or *firni* made at home with *ghee* and sugar. One woman described how her husband felt that eating chocolates was necessary as it contained fat needed to generate heat which was necessary living in a cold climate like Norway. The issue of eating vegetables and lentils remained a non issue in most of the households. Some had a limited intake of salads which were eaten mostly with festive meals and seldom with daily foods.

5.6.1 INTAKE OF RED MEATS

Meat intake included both red and white meats. I will start with intake of red meats and move on to intake of white meats as the pattern of meat intake seemed to change with the passage of time.Unlike the intake of *ghee*, which had been reduced in daily cooking due to poor health as discussed above, the intake of meats persisted as in the first period after migration despite failing health and meat intake had in fact increased from what the women narrated. From the health professionals viewpoint red meats are generally considered less healthy choices than white meat, having more saturated fat. In this chapter I have chosen to look specifically at the intake of meats as such foods were eaten daily or as often as possible and were considered a

source of good nourishment. Before I proceed further, I will briefly dwell upon their food selection before migration in order to provide a backdrop to understand better their present food intake. When asked to describe their food intake before migration, the women described daily food intake which consisted mainly of foods like lentils, vegetables, *chapattis*, and dairy products. Such foods can be labelled a traditional Pakistani staple diet. Meat was considered a high status or a lavish food, being available only to the resourceful and rich in their country of origin. The women implied that for a meal to be to qualified as a festive meal, it was essential that meat be served. For most people, meat was eaten when affordable and during festive occasions like Eid, weddings, and parties.

After migration, meat consumption increased drastically being easily available and affordable due to improved socio-economic conditions compared to their country of origin. From the early days of migration, husbands preferences for meats maintained its high intake along with dairy products.In many households it was consumed daily or as often as possible as the findings showed. Meats were perceived by the women as extra nourishing or strength giving and matched their husbands preferences as well making the selection of such foods easy for the women. Meat eaten was mostly red meat in those days as it was cheaper compared to white meats. Chicken and fish were seldom eaten being expensive foods then. Such meats were bought in ethnic stores only to ensure it being *halal* or ritually slaughtered. Below I will attempt focusing on additional factors that influenced their preference for meat foods.

When exploring why meats were preferred, several reasons were given.One reason given by the women was that meat intake was linked to traditions going far back in Islam as seen in the religious symbolic Bakra Eid lamb sacrifice giving meat a religious dimension adding to its high status. This religious dimension was further transferred to other animal proteins as well to procure nourishment. When exploring the issue of nourishment further, the women used the words equivalent to strength-giving or health promoting in Urdu when describing meats. The impact of such thinking was clearly seen in the case of one woman Tasreen, who had Diabetes and CHD. I will use her example to reflect a general notion in the community of linking intake of meat to nourishment. Tasreen said:

"Before I was ok and healthy. Now I eat very little meat. Left meat, eggs, fat after doctor told me of my high cholesterol. Maybe leaving these foods is reason for my weakness and illness".

Such a perception showed that lack of nourishment due to the exclusion of animal foods was associated with poor health, the opposite of the recommendation given by the health professional. Such animal foods were vital to health in her thinking. In her case, she was recommended to introduce dietary changes similar to the other women in the study by omitting sugar and sweets and starting to use plant oil for daily cooking after being diagnosed with insulin resistance and high cholesterol. In addition she was recommended by the health professional to eat more vegetables and lentils and reduce her meat intake. But she felt uncertain about this change. She felt her general health condition was deteriorating as she felt weak, fatigued, with various body aches and pains. By omitting or reducing foods of animal origin like meat, *ghee*, eggs, butter that were perceived by her as nourishing, she was doing what the health professional said, but she was not convinced entirely of its consequences. She felt her general weakness was in fact due to the restriction of such foods, defined as harmful by the health professional, but considered nourishing in her thinking. In addition to the reduced intake of nourishing foods, a general reduction in quantity of food was an additional factor leading to her poor health as she had been recommended to reduce food quantity in general. The perception of correct quantity or eating sufficient food was mentioned by several of the women as they felt uncertain about this issue, perceiving limited quantity as less health promoting. This notion can be linked to deprivation and scarcity of food in general in the developing world, where reduced quantity was sign of scarcity and poor health. To eat less than what a healthy body required was the cause of poor health in their thinking still.

There was also a gender component to meat intake as well.The women belonged to a patriarchal culture where the nourishment of males was essential resulting in the expectation that males require stronger foods than women, small children, or elders in general. Studies show that in such patriarchal cultures food distribution is used to express status or power relationships, as males food needs are more privileged based on social ideology as men have more status and power than women. In such cultures, often males are served first, getting portions larger than women, younger children, girls and elders (38, 40). In addition to this cultural or gender component, the women felt their migrant status played a role as well. In particular this applied to males as most of the husbands had blue collar jobs doing hard manual work like factory work in the early stages of migration having a more disadvantaged or marginal position in society. Long shift hours, or double shifts, and jobs like driving taxis, running shops or kiosks with longer than average working hours required sufficient and nourishment from foods like meat and *ghee* the women felt. Like in the case of *ghee* discussed above, meat was easily accessible due to improved socio-economic status after

migrating. A World Bank Report showed that the consumption particularly of lavish foods is often linked to socio-economic status, being an expression of purchasing power, price, preferences (19). In the case of these women, food of animal origin was an important marker of such economic success.

Other personal or individual factors determined preference for meats as well. One of the women Rehana talked about her husbands habit for meat food from the beginning of his migrant stay when he did his own cooking. Her husband had very limited cooking skills in the early stage of migrating restricting the repertoire of dishes to one or two dishes which mostly was a meat or mince curry. Food then was made primarily to alleviate hunger, making healthy eating less important, as knowledge about the harms of excess fat was lacking then. Money, jobs, house, were far more pressing issues than food intake. She felt such habits were difficult to change now despite failing health. Another woman Shazia felt the same reflecting that it was almost impossible to change such eating habits now or omit the intake of meat altogether. She commented:

"My husband eats everything, but he prefers meat and dislikes vegetables and lentils as a habit".

To conclude, the issue of food selection was made easy for the women as common perceptions of nourishment was shared by both genders and matched by their husbands preferences. The overall combination of such factors as discussed above maintained the high intake of meats in most households. As long as meat was consumed daily or as often as possible, the issue of the varying qualities of meat remained a non issue. Earlier I have stated that their migrant status positioned them as a marginalised group with low socio-economic status in Norway, compared to the rest of the population. This was combined with large family size, which entailed large quantities of meat purchase putting pressure on an already strained family food budget. Their intake was therefore restricted to less expensive red meat choices having a higher fat content than the expensive cuts. The main attention continued to remain on the distinction between *halal*/*haram* while the different qualities of meat remained a less pressing factor. White meats like fish and chicken were expensive foods in the early days and seldom eaten in this period as stated earlier. Rehana`s husband owned a meat shop which provided him with the possibility of taking the best quality of healthy lean cuts, but the large quantity required daily for large family size restricted the choice to less expensive meat as price remained a deciding factor. Several continued to do their shopping across the border

in Sweden for the same reasons where meat prices were cheaper. The end result showed that red meat was eaten daily being prepared as a traditional meat or mince curry. It was also being commonly added to fried rice as in *pulao* or *biryani* or eaten as *kebabs*. The high intake of red meat prepared as curries or fried using *ghee* during this period, resulting in high total intake of saturated fats.

With the passage of time, the women implied that with advancing age and less physical work, requirements for nourishing foods were no longer as dominant in the first generation as earlier. This thinking was an expression of their traditional Pakistani culture, as with old age and advancing weakness, irrespective of gender, lighter food is recommended with less fat and less spices.Such a diet in old age is often labelled a weak diet. A finding seen in a study of the elderly in a similar country like India supported such cultural norms implying that with advancing age it was important to eat lighter foods (51). Some of the women said they now preferred vegetables or lentils occasionally, but seldom selected such foods as there were discrepancies between the genders. The women resolved this issue silently as described by one of the women Rehana. Even though she sometimes preferred eating lentils they were seldom eaten in her household. The few times lentils were eaten, it was always added to meat. Another woman Safia said that if she preferred vegetables, she had to prepare it separately for herself and make a meat dish for her husband in addition. Alia reflected the same saying that if she wanted to eat vegetable or lentils she had to make it separately for herself. This seldom happened as it was time consuming and it would incur extra expenses on an already strained family she said. Due to this she seldom ate vegetables or lentils as traditional Pakistani food is time consuming to prepare and she had poor health in addition, feeling it was extra work to cater to many different preferences by making several dishes. The women fulfilled their roles as traditional Pakistani wives by complying to husbands preferences. Their personal preferences tended to be given lesser importance as they come secondary to the needs and preferences of males. In addition to their belonging to a patriarchal culture, the males tended to have greater socio-economic status than women after migration. Studies have shown that in the Muslim community in Britain, traditional sanctions and religious prohibitions like female seclusion had been strengthened after migration to Britain (50). Such a finding shows the weak position of women with greater dependency on males in general. This could also be applied to the women in my study. Apart from one woman none of the others had their own income being either on social welfare or on disability pensions.

Along with advancing age, deteriorating health was an additional barrier. At the time of this study several of the women, like their husbands were on disability pension or on sick leave and had been so for some period of time.An example was Rehana whose husband had been diagnosed with CHD, in addition to the increasing severity of her own Diabetes similar to several of the women and their husbands in my sample. Apart from some marginal dietary changes that had been introduced there were no major changes.Examples of changes were seen in reduced intake of refined white sugar in their tea by the Diabetics. Another example was reduced intake of *ghee* replaced by plant oils in cooking. Their main diet remained unchanged to a large extent as red meat was still being eaten daily prepared as traditional curries. The high meat intake was justified due to habit and taste, as it was no longer required for nourishment. For the ones who had poor health like Tasreen who was relatively young, whom I have discussed above, the lack of nourishment from meat foods created uncertainity in her mind. This resulted in the fact that the issue of vegetables and lentils remained largely a non issue in most households, thus keeping meat intake high. In addition, the intake of fried ethnic snacks remained high, being frequently eaten along with *mithai*, cakes, chips, biscuits and soft drinks. This was accompanied with a high intake of dairy products like cream, butter, margarine, full cream milk similar to before, maintaining total high fat intake.With the passage of time the womens focus had now shifted to the young adult second generation and their needs. This dominated family food choices, which I will discuss below, restricting the focus to intake of meats both red and white and to intake of vegetables and lentils.

5.6.2 INTAKE OF NON-RED MEATS/CHICKEN, FISH

As most of the women were living in multigenerational households with adult children, I was interested in exploring their food intake at present as compared to earlier when their children were small. Presently, red meats remained an integral part of family food as discussed above. The intake of vegetables and lentils remained negligible.However with the passage of time, certain changes seemed to have emerged as red meat (lamb and beef) had been substituted partially with more white meat like chicken and fish in their diet. Chicken was now a popular choice, and its intake had increased drastically.Attention was paid that chicken like red meat was ritually slaughtered as *halal*. This change also matched preferences of their adult children who suggested including more white meats like chicken in the family food. Such foods were perceived by their children to be healthier. This change applied particularly to chicken while

fish intake remained unaltered and negligible. The children had adopted such perceptions by interacting with the host population the women said. Being born in Norway, the second generation had been exposed to knowledge mainly from the biomedical perspective which had become implicit for them unlike their parents knowledge.They had also integrated such knowledge from other second generation Pakistani youth, who perceived white meats especially chicken to be healthier than red meats. This did not conflict with the women in their roles as mothers either as foods of animal origin were perceived as more nourishing than foods of vegetable origin by the women. One of the women Safia said:

"*Earlier red meat was eaten daily, but now every four or five days a week. Now chicken and fish are eaten once or twice a week- mostly chicken"*.

Another woman Azma said:

"We have started eating more chicken, as it is more healthy, with less fat"

This intake of chicken showed a general healthy change.However, when exploring further this change was not such a healthy change after all, as cooking methods still remained risky as all food was still made as traditional curries with generous amounts of oils. By preparing a curry, the issue of digestibility along with nourishment and taste was taken care of . Chicken was also frequently eaten grilled or roasted. At such times it was eaten as an extra dish or side dish to a meat (red) curry or as a snack or a starter before a main meal. Roast chicken was commonly eaten un-skinned as it was perceived to be better and by not removing the skin the meat remained its moisture and taste they implied. This involved a high content of fat from the skin. Boiling and steaming as cooking methods were mentioned by their adult children as being acceptable methods of food preparation, but were seldom employed by the women in their roles as mothers. The suggestion by Alia`s adult children to start using more boiled or steamed food was difficult for her as such foods would be incorrectly prepared she felt. I have discussed this issue earlier under food preparation methods.

Fish intake had also increased slightly compared to earlier as Azma narrated. Fish did not involve *halal*/*haram* distinctions. Traditionally fish was not a part of their staple diet as the women came from inland regions.The increased intake of fatty fish like salmon or trout, shows that new foods had been introduced showing changes at the community or general

level. Fish had earlier been an expensive food item both before migration and in the early phase of migration. Recently, in Norway, certain types of fish had become relatively cheap and thus easily accessible. Fish in general was perceived as being a healthy choice by both generations. In traditional medicine, fish is considered “brain food “and is categorised as heating. In bio-medicine it is also considered healthy having less saturated fat and higher content of the essential omega 3 fatty acids (45).This makes it a nutritious food in both systems, making the recommendation of fish easy to implement.

However at the individual level, fish intake did not give much health benefits. Unlike chicken which was now eaten as a main dish, fish was an optional supplement to other meat dishes. The preparation method remained risky like in the case of chicken as fish was prepared mostly as a curry using lots of oil. Some had also started baking fish as well using generous amounts of salt, butter and spices. Other popular fish preparations were fried fish, and commercially bought fish fingers being the most common form of intake. Fried fish or fish fingers were often eaten as starters or snacks with a meat curry, while baked fish was eaten as an extra dish along with a red meat curry. Apart from such methods of preparation, some had also experimented with local fish preparations as in the case of Azma. She felt she could experiment with such new local foods after having secured her adult sons nourishment by continued usage of *ghee*, meat, chicken, eggs, and milk. She felt she showed flexibility and innovation as she had introduced new local foods like fish balls, a typical Norwegian dish, at the request of her children who had picked up such preferences by interacting with the host population. To the sauce of the fish balls she often added some *ghee* to be certain the children got enough nourishment. She said:

”*As light snack or fast food I give children fish-balls, or boiled food, or mixed(frozen) vegetables or salads. Add ghee for children when making fish-ball sauce. Such light foods are best for elders. Light food has less fat, less meat. Put ghee or butter on chapatti. We eat Norwegian food like fish-fingers, pommes frites. I don`t eat fish-balls or ghee as I have blood pressure”*.

The above example of fish-balls with *ghee* shows how the women were in fact quite innovative in creating hybrid food combinations to accommodate childrens different preferences. It also shows that such foods, in this case fish-balls were perceived to be light foods not a complete meal, having less fat and no meat. Such foods were often labelled in the same category as other light meals like soups, or fast foods, salads or boiled vegetables. Such

light, boiled foods were characteristic of typical European foods, and in Azma`s thinking were best suited for the aged, not for nourishment. This made traditional Pakistani food the only source of nourishment in her thinking. When she served such foods which she considered as light meals, they were accompanied by full traditional Pakistani meals often being meat preparations.

Other changes had occurred as well, as along with traditional ethnic meat curries (red and white meats), modern global foods had been included in family foods due to children's preferences and were now eaten by both generations. This included fast foods like pizza, *kebabs*, fish hamburgers, fish fingers, or french fries.By introducing such foods Azma felt she was showing flexibility and innovation especially when introducing hybrid foods like *halal* pizza as it was only important to maintain the religious distinction between *halal*/*haram* foods in such new foods. She was less interested in its nutritional contents. Such new foods were easy to implement as they were well cooked being either fried or baked and were in addition popular modern global foods. This could have implications for the health of the next generation in the future.

The change to include more white meats was made easy for the women as it also matched the second generation's preferences, in particular the preferences of adult male sons like Safia suggested. Her old age depended on raising strong and healthy sons in line with patriarchal traditions. The above examples show how compromises were reached between expectations from children, from health professional and the women themselves. Lastly it also reflects the role of the community. Azma had adult children living at home, with a husband that was absent for long periods away in Pakistan, which was a demanding situation by itself. Such a situation could lead to more daily pressures, less stability, and stigmatisation in the community. She gave in to childrens demands more easily. In addition it increased her burden not to neglect the role as mothers by being careless with their childrens nourishment. In addition, apart from securing nourishment, the women felt it was also important to teach their children their food culture by serving them mainly Pakistani food. By making such choices they felt they were keeping traditional food culture alive by passing it on the next generation. By doing so, and by attempting new local foods for the children they felt they were balancing both identities of her adult children, yet maintaining their distance to Norwegian food which they never ate themselves.

To conclude, despite dietary changes which now included more white meats, the cooking methods remained the same as all chicken and fish was made primarily as curries with generous amounts of plant oil intake. When chicken was eaten fried, grilled or roasted, it was used as starters, snacks or extra dishes to a meat curry. Likewise when fish was baked or grilled it was eaten an extra dish along with a meat curry. The most common form of fish intake however was fried fish, and commercially bought fish fingers eaten as starters or snacks with a meat curry. This maintained high total fat intake.

5.6.3 INTAKE OF VEGETABLES AND LENTILS

Having explored the issue of foods of animal origin, I wished to explore the womens perceptions and practices concerning intake of foods of plant origin. Going back to their pre-migratory diet, the women described their traditional staple diet which consisted primarily of foods like lentils, vegetables, *chapattis*, and dairy products and some limited meat intake. Lentils and vegetables were chosen according to the season and the region where one lived. After migration, the intake of vegetables and lentils became negligible with preference for meat foods as discussed above. The women also admitted that they perceived foods of plant origin as less nourishing than animal origin. With advancing age and less need for "nourishment", some of the women like Tasreen and Alia admitted that they sometimes preferred eating lentils like *channa* and *moong*, being lighter to digest than meat foods. However, lentils were eaten as seldom as once a month. Tasreen sometimes made vegetables only for herself but that happened very seldom she reflected.

Studies from other minority settings show similar findings with low intake of vegetables and lentils in general. A UK study referred to earlier, revealed that Pakistani and Indians in Britain ate more vegetables and fruit compared to Bangladeshis but less than Europeans (21).Yet another survey of minorities revealed low intake of vegetables in general amongst Pakistani men and women (42). A similar study comparing several South Asian groups in UK showed that Muslims in general tended to eat fish, but mostly fried, never boiled or steamed, and consumed vegetables less frequently than other South Asian groups in comparison (20).The study from Oslo in 1992, showed that after migration, there was little or no changes in intake of lentils and vegetables. However, the women in my study narrated that intake of vegetables and lentils had in general been greatly reduced after migration with preference for meat foods.

The reasons given for reduced intake of vegetables and lentils were several. Below I will attempt exploring some of them. In bio-medicine lentils and vegetables are healthy foods having low glycemic index (GI) compared to meat foods and are good sources of proteins, vitamins, fibre, and minerals (19).In addition they are recommended to combat obesity, Diabetes and CHD being high in complex carbohydrates and fibre, and low in fat and sugars (3). The women agreed that vegetables and lentils could be healthy to some extent, but when comparing them with meats, the women felt meats provided better nourishment as discussed above. One of the women, Safia, served vegetables to her children occasionally, but with it she served boiled eggs in addition, making sure they got sufficient animal proteins, as eggs were considered nourishing like meat and "heating". In the traditional classification of foods, vegetables and lentils generally tend to have a cooling property as opposite to meat foods that are considered heating (40).Such properties governed Safia`s selection of foods as in her thinking foods of animal origin provided better heat and energy and nourishment than vegetables and lentils. Some of the other women did not readily agree with what she implied, and felt this was a wrong perception yet they had low consumption as they felt it was outside their control blaming it the husbands and childrens preferences as discussed earlier.

The issue of nourishment remained complex having a socio-economic perspective as well. When exploring their thoughts further, some of the women suggested foods of plant origin were consumed by less privileged or poor people in Pakistan where such foods were much cheaper and more easily available than meat. Such foods were associated with low status and poverty being directly linked to low socio-economic status. This can apply to a developing country like Pakistan where in daily life meat is simply not available or in limited quantities. This may result in diet being restricted to mostly vegetables and lentils which is imposed by inaccessibility unlike by religion as in Hindus. Alia said:

"Only poor people ate lentils and vegetables in Pakistan where only the rich could afford meat."

In addition to such perceptions, price in Norway was another reason given by Alia. She felt that popular and familiar vegetables like aubergine, ladies fingers, *karella* were imported and were only slightly less expensive than meat. This made the choice for meats easier for her she felt. Alia ate vegetables and lentils occasionally if she was in the mood for change, not due to

health. Only one woman, Musarat, ate vegetables more frequently than the others. She was living alone without a spouse at the time of the study and her adult son was staying way from home while her married daughter was living in a separate household. Her perception was very different from the others as she implied:

"Boiled vegetables and lentils and boiled fish are as nutritious as meat, but people just think it is different."

She had limited contact with the others, meeting only at the centre and felt she was less dependent on the community for interaction being more individualistic in her approach. She had the highest level of education in the group. This shows that there was diversity in attitudes especially at the individual level, reflecting the danger of stereotyping or assuming all persons from on ethnic group as "all the same".

Such perceptions were further compounded by negative attitudes by adult childrens preferences. The childrens dislike for vegetables and lentils was more related to taste, unlike the adult generation where it was linked to lower socio-economic status and perceptions of poor nourishment. One woman Tasreen narrated of her adult children:

"Children ask why they should eat dal subzi(lentils, vegetables). I like it, but children tell us parents that dal is eaten in your Pakistan. They say here in Norway, nobody eats "dal–shal". So they refuse to eat such foods. They hear this from their friends who are both Pakistani and Norwegian."

The combination of the above reasons made the issue of eating foods of plant origin a non-issue in most households. However, now due to failing health in the first generation, and dietary recommendations from the health professional they were forced to reconsider such thinking and try and include more foods of plant origin in their diet. Alia`s strategy was to do so by adding or cooking vegetables and lentils together with meat prepared as a meat curry as the taste of meat was essential to maintain. The few times vegetables were eaten separately, they were prepared in traditional manner as a vegetable curry or fried using cooking oil generously to fry, or sauté the vegetables. The overcooking of foods in such a manner was harmful as vitamins were lost and fat and salt intake remained high. They were never eaten boiled or steamed.A popular vegetable like *karella* which is recommended for

Diabetes was eaten more frequently now by some, but it was mostly fried in oil and salt and spices or added to a meat curry. Likewise,the few times lentils were eaten, it was added to meat like in the case of vegetables. Sometimes lentils were prepared as a lentil curry and *ghee* was used in the seasoning for providing nourishment and taste. This preparation method may also be linked to traditional medicine, which the women had implicit knowledge of, where it is suggested combining lentils with fat/oily foods (45). Further it has been suggested that in traditional medicine lentils are not recommended for thin or deficient persons, while for overweight, heat conditions lentils are considered balancing (45).

The above strategy of adding vegetables and lentils to meat was similar to cooking methods before migrating where seasonal vegetables were commonly added to a meat curry for taste, and to increase quantity. Lentils were also used in this manner. In Norway, this was made easy as vegetables and lentils were now easily available in most ethnic stores in Oslo. In particular, certain specific green and yellow vegetables like bitter gourd or *karella*, ladies fingers, spinach, aubergine, were also now easily available from ethnic shops unlike earlier when mostly vegetables like potatoes were used for this purpose.

To conclude, pure vegetarian food was eaten seldom as meat foods continued to be eaten daily. To include more vegetables and lentils in the diet as recommended by health professional, such foods were now mostly added to meat curry. This added taste as well as it increased the quantity of the main curry, making this change easy to implement. However, the method of preparation remained risky as such foods were made as a meat curry.Vegetables were also prepared as a pure vegetable curry or were fried as a *subzi* using generous amounts of oils This led to overcooking of vegetables which destroyed the vitamin content. Lentils in general were eaten less frequently than vegetables. The few times lentils were eaten they were often added to a meat curry similar to vegetables. When made separately as a lentil curry they were garnished or seasoned with *ghee*. When prepared in such a manner without being added to meat, such pure vegetarian dishes were eaten as an extra dish often along with a meat curry increasing the total number of dishes. This added to their work load as well as Alia admitted traditional Pakistani food was time consuming and tiring to prepare adding to their poor health. The above food intake maintained high total fat intake.

5.7 FOOD SELECTION IN THE PUBLIC SPHERE

Having discussed food intake in the womens private sphere, I wished to explore food intake in the public sphere involving their roles as hostess and guest, keeping in mind that the role as hostess involved the public sphere even though it took place in their homes in contrast to the role as guest. For the purpose of analysis, I have chosen to divide festive foods into festive snacks and festive meals. Festive snacks may again be further differentiated into sweet and non- sweet snacks. Festive meals may be also divided into main meals followed by sweet dishes or desserts. I will start with a description of what comprises such foods. Next I will discuss the reasons for the intake of festive foods in general with emphasis on festive meals in particular. Finally I will discuss the womens coping strategies with regard to such festive foods keeping in mind that several had poor health similar to others they socialised with.

Some commonly eaten and popular non-sweet snacks as described by the women were *samosas*, and *pakoras* mentioned earlier along with meat *kebabs*. In addition, sweets called *mithai* containing both *ghee* and sugar, bought in ethnic sweet shops was served and eaten especially when there were special occasions. Biscuits, cakes, chips, soft drinks bought in local shops were also popularly served. Several of the Diabetics said they still ate biscuits but had switched from sweet to salt biscuits.Festive meals included meat dishes like *kofta, korma* or chicken curry, tandoori chicken, *biryani*, and *pulao* and *kebabs* to name some dishes as narrated by the women. Often this was accompanied with sweet desserts like *kheer, sewaiyan, halwa, zarda*(see glossary).Such foods were perceived as lavish, traditional, and well prepared foods. Often when having a festive meal, different types of snacks like *samosas, pakoras,* chips, *kebabs* were served to guests before the serving of a main meal. In the private sphere occasionally foods of vegetable origin were included, while in the public sphere such foods were seldom included as only foods of animal origin were preferred and selected.

The intake of festive snacks and meals occurred at a frequency of almost once or twice a week. When entertaining guests at home the women said they used an average of 1-2 days to plan and prepare food for a festive meal. During the interviews conducted in the womens homes, as a general rule, I was always served soft drinks, *kebabs* and often *samosas* or *pakoras*, with hot sweet milky tea, reflecting the type of snacks considered suitable to guests. In addition, it was important that there was always food placed and available in front of guests.When food was eaten in the public sphere, the women including their female guests often tended to eat separately than the males as it was not a tradition to eat together at the

same table. This was done after the male guests and other adult male family members were served first. This had links to their patriarchal traditions and the status of males.

5.7.1 INTAKE OF FESTIVE SNACKS

The most common examples of traditional ethnic non-sweet snacks were *samosas* which were made of refined white flour and stuffed with potatoes or minced meat. Another common snack were *pakoras* which were made with gram flour and like *samosas* deep fried in oil which was used and reused several times, as shown earlier. Such snacks were mostly made at home by the women and could also be bought in ethnic shops. Such snacks were consumed frequently in all settings, irrespective of socio-economic status and were associated with general hospitality. They were easy to prepare and not associated with being lavish, as they were relatively low cost foods, being available and affordable to most people even before migrating. Several of the women said they had large quantities of semi-prepared *samosas* in the freezer ready for deep frying for guests at all times leading to easy availability. *Pakoras* on the other hand were made fresh each time and deep fried often in re-used oil. Such *samosas* and *pakoras* were frequently accompanied with *dal sev*, and soft drinks like coke, and milky sweet tea. The repertoire of snacks had been expanded to include cakes, chips, and biscuits which were cheap and easily available. Such foods were bought in local shops and consumed with high frequency.

The most common sweet snacks consumed frequently were low cost salt and sweet biscuits, and pre-packaged low cost cakes bought in local Norwegian shops containing fat and sugar and other preservatives.In addition, commercially bought traditional sweets called *mithai* (*gulab-jamuns, jalebis*) bought in local Asian sweet shops, were served and eaten especially when there were special occasions. Such *mithai* was made with full fat milk, pure *ghee* and sugar and often deep fried in plant oils. *Mithai* tended to be expensive and high priced being eaten less frequently than biscuits and cakes.*Mithai* was eaten especially when marking important religious and personal celebrations like weddings, birthdays, religious festivals like Eid, or the birth of a baby. Such important events could only be marked by sweet taste the women said. As markers of such important celebrations *mithai* was often bought, distributed, eaten, and served irrespective of health status including persons with Diabetes. This problem had re-emerged of late as earlier Diabetics that had been more restrictive in their sweet intake now tended to be less careful. The reason being now that such *mithai* was being marketed as

being prepared with artificial sweeteners especially for Diabetic customers in ethnic sweets shops. Such sweet shops took great pride in advertising the use of pure *ghee* in the preparation of such sweets. Few of the women felt that fat was a problem for Diabetics as the attention remained on sugar intake which had been omitted or reduced to some extent which I have shown earlier.

5.7.2 INTAKE OF FESTIVE MEALS

Festive meals consisted primarily of non-vegetarian dishes containing rich, fatty, energy dense foods, using meat, chicken, *ghee* in addition to generous amounts of salt and spices. Some examples of such dishes were *korma*, *kofta*, chicken curry. Such curries were eaten along with other energy dense dishes like *biryani*, and *pulao* which contained meat, *ghee*, and polished white basmati rice. Meat *kebabs* were also popularly served and eaten. Tandoori chicken was also popular, in addition to chicken being roasted or grilled. Fish was also sometimes served.Festive meals also included sweet desserts like *kheer*, *sewaiyan*, *halwa*, *zarda* as narrated by the women. A festive meal was often preceded by several non-sweet snacks as described above that were often served as starters before the main meal.Concerning guests, there was a general opinion that guests were to be given special attention.One of the women, Aisha said:

"We try to serve very nice food to guests. Tradition says we must do all for guests. If we people get 10 guests and there is limited food then we tell women and children not to eat but give guests first. We are like that. If there is not sufficient food, then guests and males are served first and eat together and wife and children later."

5.7.3 REASONS FOR INTAKE OF FESTIVE SNACKS/MEALS

The reasons given for intake of such foods were several. I will dwell upon some of them. One important reason was the impact of improved socio-economic status. For the women to serve dishes where meat, pure *ghee*, sugar were generously used were a marker of their economic success and reflected being well off and gave status.Often a festive meal could contain 7-8 dishes, of which mostly all were some variation of meat, as lentils or vegetables which were

cheaper than meats was seldom served to guests. Traditionally foods like meat, *ghee*, butter, milk, sugar, refined flour were symbols of luxury foods back home.Such foods were coveted being expensive and often unavailable. *Ghee*, butter, sugar were sold in black market in times of rationing or scarcity back in Pakistan. In addition there was a danger of adulteration as well. An example of this was full cream milk that had been diluted with water.The"thinning out "of fats was associated with being "less nourishing" or poor quality foods. Such perceptions still persisted in their minds as less fatty milk was as perceived as being adulterated and less nourishing.

The issue of ethnic and cultural identity was also essential factors involving both community and personal identity. It has been implied that migrants often use familiar foods with specific taste to maintain identity in a foreign land (7).The women belonged to a small tightly knit ethnic minority community. This provided both bonding and security as well as rigidity. They perceived their food as an important marker of their ethnic identity being different from the host community, making food culture an important part of ethnicity as shown by Adel (7). In the private sphere as I have discussed earlier, the importance of passing food culture to the next generation in their role as mothers was important. In the public sphere, community identity was important as food culture also reflected conformity or bonding to others from the same ethnic community when socialising. This occurred mostly during weekends, at parties, and as markers of important celebrations. In addition it helped maintaining bonding with homeland. Further, such festive foods reflected good cooking and housekeeping skills. The example of Shazia illustrates this well. She had stopped using *ghee* for daily cooking like discussed above, but for festive foods, she always used pure home made *ghee* instead of plant oils for cooking. Such plant oils were considered a less favoured substitute to *ghee*, as well as certain plant oils give incorrect taste she implied. Preparing tasy foods required good cooking skills which was an essential part of her female identity both personally and in the eyes of the others in the community. This applied to the other women as well. Not taking this role seriously could reflect back on their immediate and extended family both here and back home. Some implied that his could have implications for further socialisation patterns and even marriage alliances for their children in the future as they could risk getting labelled as incompetent housewives and hostesses as the two roles often overlapped.

The combination of the above factors justified and maintained the intake of rich energy dense foods. There was all reason to believe that this pattern would continue to persist in the future

as studies have shown that in general first generation migrants are less likely to change food habits and continue to retain old food habits (7).However, due to present failing health they were forced to reconsider such thinking. Below I will attempt discussing how they coped with the problem and their choice of strategy. The womens present poor health as well as the poor health of others in their close family or network now emerged as a barrier.Their high frequency of socialising added to the problem. Earlier findings have shown that in this particular community, socialisation was limited primarily within their own ethnic community (52).This aspect of migrant Asians social life has also been seen in Greenhalgh`s study of British Muslims, who described high intake of sweets and rich foods due to high frequency of communal feasts, festivals, and social occasions (37).

5.7.4 COPING STRATEGIES RELATED TO INTAKE OF FESTIVE SNACKS/MEALS

The role as hostess was difficult as perceived by the women as it entailed several choices. One could either choose to ignore or take into consideration the health status of the guests.There was a general perception that intake of non-sweet foods was less harmful for Diabetes.The main attention remained therefore on reduction of sweet intake. In addition Diabetes without late complications or physical manifestations, made it "invisible" as none of the women had any physical manifestations of disease and therefore considered it a less serious condition. Most of the Diabetics had omitted adding visible sugar in tea and were using artificial sweeteners or drinking sugarless tea offered to them, like I have shown earlier. Apart from this change, most of the women seemed less critical of invisible sweet intake, as sweet desserts and *mithai* continued to be served and eaten, remaining an invisible source of sugar and fat intake.

One of the women Azma was aware of this and commented:

"Some of my guests who visit, they drop sugar in tea but eat sweets at the same time. Don`t think it is the same – eat zarda (sweet dish) which is full of sugar and ghee and drink sugarless tea, thinking it is ok".

Apart from observing this change, she did not comment upon intervening. However there were others who attempted managing this problem especially if there were close family members who suffered from poor health. The case of Razia illustrates this well. She was the youngest in the sample, literate, with urban background, and had neither Diabetes or CHD at the time of the study. It was important for her to socially participate by serving traditional festive foods containing both *ghee* and sugar. This was problematic now as her husband had developed Diabetes and CHD, similar to several of her guests who frequently visited her home.Her husband was particularly fond of sweet desserts like *sewaiyan* or *kheer,* she commented. She had omitted adding refined white sugar in his tea, similar to others as in her thinking, sugar was the culprit unlike fat in Diabetes management. Her strategy was now to differentiate between normal and patient food as she had started preparing a portion of the sweet dish separately for the Diabetics using artificial sweeteners.By doing so she perceived herself as a good housewife and hostess as she continued to serve such foods which symbolised bonding to homeland and helped maintaining community identity.Last but not least, she admitted she lacked other ideas and had no other alternative dishes to serve either. By choosing such a strategy, she was showing that she was in fact quite innovative and flexible in her confrontation to health professional recommendations. Her strategy had solved the problem of sugar but not fat, as the fat intake continued to remain high as such sweets desserts contained generous amounts of *ghee* along with sugar.

A different strategy was chosen in the case of another woman Aisha. She was presently living alone with adult children, while her husband was absent periodically in their homeland. She did not have Diabetes or CHD. She felt that the responsibility of guest`s health did not rest on her shoulders as she said:

"My guests health is not my problem and my house is not a hospital"

She implied that her role as hostess was to serve traditional, lavish, tasty, rich, energy dense foods prepared generously with *ghee*, meat, salt, spices and sugar. By serving alternatively prepared foods that had less fat, sugar, salt to accommodate her guests health needs, would affect her role as hostess in a negative manner, as such foods could be labelled less tasty and less lavish foods. This might reflect on her as having low socio-economic status or having poor cooking skills. This was an easy decision for her as her household was an exception as none had Diabetes or CHD compared to the other women`s households. She had also made a general level change by offering artificial sweeteners for tea to her guests. But beyond that

she was unwilling to make further changes. This seemed to be a more common practice amongst several of the women unlike Razia discussed above who had a Diabetic husband living at home and was very clear in her strategy.

Apart from the coping strategies involving sweet foods, yet another strategy emerged which involved non sweet foods. Some of the women felt they should accommodate the needs of their Diabetic guests by serving special vegetable dishes like *karella* or bitter gourd. *Karella* is bitter in taste and popularly eaten by Diabetics in the Indian sub-continent as it is believed to have a curative effect. The women now made *karella* as a separate dish in addition to the regular repertoire of festive dishes, or added *karella* to meat curry, a popular dish enjoyed by both Diabetics and Non-Diabetics. However, the method of preparation remained risky since it was added to a meat curry or fried as a subzi keeping the oil or fat and salt content high.

Socialisation in the public sphere also involved the women's roles as guests. The findings showed that type of food intake in the role as guest involved the same foods that were served in the role as hostess described above to a large extent. The reasons also remained to large extent the same involving the role of food as an important marker of personal cooking skills and ethnic and cultural identity, as well as a marker of socio-economic success, which I have already discussed above. However there was one major difference, as the roles were reversed as now the women were "receivers" of such food unlike "givers "of foods seen in the role as hostess.

Below I will attempt discussing how they coped with the problem in their role as guests. Like I have shown earlier attention remained on sweet intake for the Diabetics while fat intake was largely ignored by both Diabetics and Non-Diabetics. This continued to remain a problem. One woman Rufina with Diabetes and CHD spoke about her own experiences.
She said:

" I eat pakoras and samosas often-every now and then at home and especially when socialising."

She narrated further that earlier *mithai* was commonly eaten by her even if there was no important event to mark.After falling sick, this had been reduced to some extent as *mithai* was seldom bought nowadays implying that buying is a voluntary act giving control over the choice of ones actions or behaviour. This was however more difficult in the role as guest as it was difficult to refuse *mithai* when offered. Several of the other women had similar

experiences. They were left to make a calculated compromise between social obligations and dietary compliance. When offered such foods, one could choose between two strategies. One option was to accept such sweets, but in reduced quantity, while the other option was to refuse it altogether. Several of the women opted for the former strategy. Existing codes of hospitality and conduct made it impolite to reject offered foods despite being Diabetic as it would be considered offensive behaviour. The case of Rufina illustrates such behaviour showing that despite her reduction on buying *mithai*, the issue of intake still remained problematic.This applied to other other festive foods as well, as she said:

"Mithai is seldom eaten, many months in between. Never buy it myself any longer as I have Diabetes. But if someone serves mithai then we cannot refuse and must eat. Kebabs, pakoras are also eaten several times a week. Tea is still always made with full cream milk".

At such times the women's health status was temporarily put aside to make room for social obligations.Outside their community the role as guest also posed a problem.The women had never visited a Norwegian home or had Norwegian guests, and were uncertain about accepting foods due to general scepticism especially concerning religious *hala/haram* restrictions. One of the women Razia related an incident where her Norwegian neighbour had offered some food which she declined as she was uncertain if it was *halal* or not. This was in reciprocation to her having first offered some Pakistani food to the neighbour first. This exchange of foods occurred once only. In general, the women felt they had limited control over this situation in the role as guest.

6. CONCLUSION

6.1 SUMMARY OF MAIN FINDINGS

This chapter entails a summary of the main results and discussion followed by implications from a public health perspective. Through this study I have tried to let the womens accounts and interpretations be voiced showing their capacity to negotiate to a changing environment. The study shows that food intake is not just an isolated nutritional phenomenon but also has a

socio-cultural dimension as well. This was expressed in the womens perceptions that determined their choices more than biomedical nutritional facts or information.

In the case of cooking methods, perceptions of digestibility were maintained by the women by preparing food mainly as curries or by shallow and deep frying of foods making such methods popular cooking methods. Boiling or steaming were the least popular methods employed. To completely omit fats and spices and eat boiled or steamed foods was incompatible to their thinking, as such foods were perceived as indigestible and considered “weak foods” being suitable for elders, sick and babies or others with weak digestion.

Concerning choice of cooking medium, in the early days of migration and up to quite recently, home made *ghee* was preferred as the perfect cooking medium.It was also perceived as being highly nourishing. *Ghee* was used generously for all types of daily and festive cooking along with plant oils that were reserved for deep frying. However due to failing health they were now forced to reconsider their thinking. The fact that the health professional considered *ghee* as an unhealthy source of saturated fat, did not mean that the women dismissed *ghee* intake entirely as it still remained a status food in their thinking. Even though most of the women had switched to plant oils as a cooking medium for daily cooking as recommended by the health professional, *ghee* still had a role to play. It was being used for certain daily foods like *parathas* and *khidchri* and seasoning of lentils providing nourishment and flavour. It was no longer the amount of *ghee* that mattered as its present usage had more symbolic value. Now even just a small dash was sufficient making it the ultimate symbol for expressing care and nourishment and good cooking skills providing correct taste and flavour of festive foods like *biryani*, *pulao*, *zarda*, *halwa*. While some still made *ghee* at home many were now buying commercially prepared *ghee* called “Tine *ghee*” produced by a local Norwegian dairy. The continued usage of *ghee* shows that fats by itself has no meaning. It is only in use in diverse contexts it acquires meaning.

In the case of switching to plant oils as the main cooking medium, cheap, refined, processed plant oils like corn oil, saffola oil were now commonly used for daily cooking. In general there seemed to be less resistance to using plant oils as they were cheaper and more easily available compared to *ghee,* and familiar from before migrating. Neither did it interfere with their food selection. Since olive oil was perceived as heating in traditional medicine, most of the women did not use it at all. Some had tried it but did not pursue its usage while others had tried mixing it with others plant oils.Its particular taste, high price and unsuitability for

frying at high temperatures were additional barriers. Despite the switch to plant oils other risks had emerged. The issue of quantity seemed to be largely ignored as none of the women used standardised measures, trusting their own judgement and skills when portioning out oil for use in cooking. In addition plant oils were used and reused several times over a period of several weeks.

In the case of food selection in the private sphere, it was difficult for the women to perceive being healthy without intake of foods of animal origin entirely. This was most evident in the case of meats, as they perceived foods of animal origin as more nourishing than foods of plant origin. Such perceptions were shared by both the genders and matched by their husbands preferences. Meat was eaten as often as possible and in most homes it was eaten daily. Apart from providing nourishment, such foods remained markers of improved socio-economic status and cultural identity reflecting bonding to the homeland. In addition, the preparation of traditional meat dishes reflected good cooking skills. In the early days of migration and up to recently, meat eaten was mostly red meat, being cheaper than more lean cuts or white meats. Such dietary habits were now being challenged due to increasing poor health in the first generation, forcing them to reconsider their thinking. This change occurred at the same time with the natural biological process of ageing. This put lesser demands on the needs of "nourishing" foods. However, to completely omit meats and increase intake of more vegetables and lentils remained difficult as other barriers had emerged. As all the women were living in multigenerational households, the role of the second generation as young adults, especially male sons now seemed to play a role. Due to adult childrens preferences food intake continued to remain largely non-vegetarian similar to before. In addition, the preparation of such traditional foods remained a marker of ethnic identity which the women felt was important to pass on to the next generation.

However, there were certain changes that had been introduced based upon the health professionals recommendations which also matched adult childrens preferences. Now, more white meats like chicken had been added to the family diet being more easily available and cheap compared to earlier. Often un-skinned chicken was popularly prepared as a curry. It was also eaten grilled, roasted or fried. When prepared in the latter manner chicken was eaten as a side dish to a red meat curry or as starters or snacks before a main meal. Fish intake had increased slightly, being popularly prepared as a fish curry.Another popular form was fish fingers and fried fish which were eaten as a side dish to a meat curry or as snacks or starters. The intake of vegetables and lentils remained negligible similar to before, and the few times

they were eaten, they were mostly added to a meat curry or made as a vegetable or lentil curry. Vegetables were also eaten fried or sauted as a *subzi* . When vegetables and lentils were made separately from meat, often a meat curry was also prepared maintaining a non vegetarian tradition. In addition, modern global foods like pizza, fish burgers, French fries, *kebabs* had been introduced which both generations now had started eating. This was accompanied with a high intake of dairy products like cream, butter, margarine, full cream milk along with high intake of soft drinks, chips and biscuits similar to before.

In the public sphere, the role as hostess was difficult to negotiate and was at stake if they did not serve tasty, rich, energy dense, lavish festive foods with generous amounts of *ghee*, sugar and meats which were time consuming to prepare. Such foods remained markers of improved socio-economic status. They also were markers of ethnic identity reflecting bonding to each other. In addition, the preparation of such dishes reflected good cooking skills. Such foods were also frequently consumed in the role as guest. There were exceptions to this rule however, when it came to sugar, as some felt in the role as hostess they were allowed some flexibility as they felt they had the choice of what to serve and how to prepare it as a "giver" of foods. In contrast, the role as guest or as a "receiver" of offered foods was more rigid and difficult to control making it impossible to refuse sweets when served despite having Diabetes. Such perceptions and attitudes were combined with a high degree of socialising within the community. Earlier I have shown that bonding to homeland was an important reason. This had other negative implications as well. The womens interaction primarily in their own ethnic community made definitions of what comprises festive foods easy for them, as such knowledge was implicit. On the other hand, it also led to rigidity with no opening for other alternatives. As none of them were working outside the house, they generally had the time available, but their general workload increased tremendously in their role as hostess putting great demands on them.This lead to fatigue and tiredness which several complained about in addition to poor health in general.

To conclude, the attention of the women remained primarily on sweet intake as many had omitted visible sugar in tea and reduced buying *mithai* which contained both *ghee* and sugar. However when *mithai* was served it was difficult to refuse such foods as it would be considered rude or impolite. Fat intake remained unattended or largely ignored as rich, energy dense festive dishes like *biryani*, *pulao*, curries, desserts, fried snacks were frequently eaten by all irrespective of their health status. This occurred both in a daily and non-daily setting. The women's perceptions as shown above, combined with socio cultural factors like living

arrangements and community participation, made practical rationality or biomedical knowledge less important. The general overall message given by the health professional was interpreted as a message to start eating ”a poor mans food again” and was perceived as difficult to implement by the women. In addition, few felt that fat intake alone from choice of cooking medium or from foods like red meat was the reason for their poor health as their attention remained on sweet intake especially in the case of the Diabetes. The study revealed the impression that despite introducing certain changes as recommended by the health professional like consuming less sugar, using plant oils, eating more white meat, the total fat intake may have in fact increased compared to earlier. In particular the intake of plant oils and *ghee* remained high.The study show that change is possible but that change itself has not necessarily led to a healthier diet or less fatty diet.

6.2 IMPLICATIONS FOR PUBLIC HEALTH

This study cannot be complete without discussing the implications such a diet may have from a public health perspective.There tends to be a widespread perception amongst health professionals that obesity may also be a result of ignorance (30). This is not entirely correct as I have tried to show that in this particular sample, there were socio-cultural factors with roots in traditional medicine, along with their belonging to a minority community that decided their food choices.The women chose to fall back on their own perceptions regarding nourishment and digestibility more than biomedical nutritional facts. Further, my study shows that just being conveyed a general message that “fat is harmful” is insufficient to change dietary habits without the understanding of the role of such foods and their context in the lives of these particular women. For the future the dietary message therefore should be tailored specifically for this group.In the case of the Diabetics, besides the focus on reduced sugar intake, the message should also include “*less saturated fats (ghee)and less quantity of plant oils* ”as well.

In addition to tailoring the message, it is important that recommendations are followed up in a practical manner too. This can be done in different settings or arenas. An example of this was the centre from which the women were recruited where several had attended practical cooking demonstrations, done in conjunction with the women themselves who expressed they desired to learn more healthy traditional cooking. A UK study by Farooqi supported this idea. The

respondents in Farooqi`s study preferred their own traditional food but desired learning to cook it in a more healthy manner (53). In other words, motivation to change was not a problem. Other examples of such settings mentioned by the women where they had participated in such cooking demonstrations were patient educational centres in hospitals like Aker Hospital and Lovisenberg Hospital (Lærings og Mestrings Senter). The role of such patient educational centres should be strengthened in the future.

In addition to practical skills in preparing healthy traditional foods, the need for competency regarding reading and understanding nutritional information is important, especially in the case of commercially bought foods like butter, margarine, plant oils, milk, and cheese. Several of the women lacked reading skills being ignorant about label or nutritional contents in such foods. Donaldsen`s UK study mentioned earlier showed a high rate of illiteracy amongst first generation South Asian women, revealing that 35% could not read in any language at all, the proportion being as high as 63 % in the age group over 65 years, making them completely dependent on other family members to access any information (26).This problem applied to several of the women in my study as well who lacked reading skills in Urdu. For others, language continued to remain a barrier as they were unable to understand nutritional contents of foods as it was written in Norwegian, which they had negligible skills of. In addition, they faced a double burden as nutritional contents were written in biomedical, scientific data which made the task even more difficult. For the purpose of public health this implies that nutritional data should be translated in major ethnic languages in addition to the use of other unconventional or new methods like colour codes, bars, illustrations, to be more easily understood. Specific tailor made brochures in ethnic languages on the dangers of excessive fat intake should be published using similar methods. Videos, CD`s are other tools that can be used. In addition to the above measures, the use of migrant media channels, like radio, TV, newspapers should be accessed. Conferences, seminars, should be convened to discuss such public health issues, along with targeting ethnic groups at mosques, womens groups and other meeting places.

A WHO program concerning ageing and health recognises gender as a major determinant of health (27).This program states that women will outnumber males due to longer life expectancy. However, living longer does not necessarily mean living healthier, as the likelihood of disability increases with age, and several national surveys show increasing numbers of disabled women among the aged. This WHO program revealed that heart disease and stroke will account for almost 60 % of all female adult deaths in the future. My study

shows that the women often tended to ignore their own health as their patient role tended often to be underplayed or and subordinate to their other roles as mothers, wives or hostess and guest. This supports the “multiple jeopardy “theory of ageing in minorities, where ethnicity, aging, chronic disability, and gender make this group extra vulnerable (54). For the future, there is all reason for concern to promote better health and prevent chronic disease by empowering ethnic minority women to manage their health and illness by providing them with good solutions and knowledge that incorporates their traditional thinking and life patterns.

This should involve the issue of multigenerational households as well, as all the women in my study apart from one was living in multigenerational households. This was maintained not only for convenience or custom, but due to preference for living arrangements. Some of the women described how their old age depended on maintaining good relations especially with adult sons as the likelihood of living with a son was strong in the future. This may have implications for public health as just targeting the women alone will have little or no effect unless other adult family members are involved in decision making and intervention. Due to their patriarchal culture, and the status of males, support from male family member is essential to enforce lifestyle changes.This implies that public health education cannot promote lifestyle changes without taking into account the context or life situation of the women. Empowerment of the women must include their families as a whole including the ethnic community to which they belong. This remains a challenge for public health.

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APPENDICES

1. Questionaire to accquire socio-demographic data of the respondents used preliminary to the main qualitative in depth interviewing.

- Name
- Age
- Address
- Marital status
- Place of birth, city, village
- Number of years in Norway
- Number of years of education
- Profession
- Household, size, structure, number of children and adults with age and sex of children.
- Husbands occupation
- Husbands education
- Husbands working title
- Husbands health condition
- Social security
- Sick leave

2. Letter of informed consent

In addition a letter of informed consent was provided and signed by the respondents to ensure the respondents participation in the study with her own consent.

3. Glossary

Curry = meat/fish & spices cooked together in a gravy

Ghee = clarified butter or butter oil

Subzi = fried or sauted vegetables

Dals = general word for lentils

Channa dal= one specific type of lentils

Moong dal = one specific type of lentils

Mithai = traditional ethnic sweets made with ghee and sugar. Examples: burfi, jalebi, gulab- jamun

Chapattis = flour pancakes

Paratha= fried chapattis

Pooris= deep fried flour pancakes

Samosa = traditional deep fried patties

Pakora = traditional deep fried fritters

Dal sev= fried salty snacks made of gram flour

Biryani/pulao= rice and meat fried together

Kebabs = meat patties

Khichidi = rice and lentils cooked together.

Andaza= own judgement or cooking skills

Tarka=seasoning of lentils

Maida =white flour

Firni, zarda, sewaiyan, halwa=sweet desserts containing sugar, ghee, milk

Korma/kofta= meat curries

Saffron, cumin, garam masala =commonly used spices in a curry

Karella=bitter gourd vegetable

Halal= ritually slaughtered meat as perceived necessary in Islam

Haram=forbidden foods in Islam

4. Table 1. A table showing health status of the women and their husbands at time of study

	Number of persons with diagnosis of Diabetes(D)	Number of persons with diagnosis of coronary heart disease (CHD)	Number of persons with diagnosis of both D/CHD	Number of persons without any diagnosis
Women	8	3 (of which one had angina, and one had heart attack earlier.)	Of the 3 with CHD, 2 had both D/CHD	1
Husbands	4	4 (of which 3 had heart attacks earlier of which one had bypass)	Of the 4 with CHD, 3 had both D/CHD	1 expired